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Draft

City and County of San Francisco
San Francisco City Planning Commission

Environmental Impact Report

Montgomery - Washington Building

DRAFT
81.104E

Publication Date: November 13, 1981

Public Comment Period: November 13, 1981 through
December 14, 1981

Public Hearing Date: December 17, 1981

Written comments should be sent to the Environmental
Review Officer, 45 Hyde Street, San Francisco, CA 94102

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Environmental Science Associates, Inc.

1291 E. Hillsdale Boulevard Foster City, California 94404 415/573-8500

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MEMORANDUM

TO: Recipients of the Draft Environmental Impact Report (EIR) for the
Montgomery - Washington Building (81.104E)

FROM: Environmental Science Associates

SUBJECT: ERRATA

DATE: November 20, 1981

- Item 1. The public Comment Period indicated on the Cover and Title Page of the subject report is in error. The Public Comment Period is from November 13, 1981 through December 17, 1981.
- Item 2. Figure 22, Projected Shadow Patterns in Vicinity of Project Mid-December, is incomplete in the Draft EIR. A revised Figure 22, to be substituted for page 64 of the report, is included with this Memorandum.

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The map displays a grid of streets in downtown San Francisco. The proposed cable car route is highlighted with a thick, shaded line. The route begins at the intersection of Grant Avenue and Commercial Street, runs north along Grant Avenue, and then turns east along Montgomery Street. The map includes labels for major streets such as Pacific Avenue, Jackson Street, Washington Street, Clay Street, Grant Avenue, Commercial Street, Kearny Street, Montgomery Street, Sansome Street, and Columbus Avenue. A shaded area indicates the proposed route of the cable car line, starting from the intersection of Grant Avenue and Commercial Street, running north along Grant Avenue, and then turning east along Montgomery Street. The map also shows various building footprints and street names.



FIGURE 22
Projected
Shadow Patterns
in Vicinity
of Project
Mid-December

SHADOW

The project, in replacing existing low-rise structures on the site, would create more extensive shadow patterns than exist at present. Much of the project shadow patterns would coincide with those cast by existing structures in the area (601 Montgomery, Holiday Inn, and the Transamerica building). The project would not shade any existing public parks.

Washington and Montgomery Sts. are shaded by existing structures throughout the day at all seasons of the year. Portions of Columbus Ave. are shaded from mid-morning to early afternoon hours in the fall, winter and spring months. Portions of the lower floors of the Transamerica Pyramid are shaded in the late afternoon year-round. Sansome St., one block east of the site, is shaded in the late afternoon year-round, and in the early afternoon in the fall through spring months.

At all seasons of the year, early-morning shadows due to the project would generally coincide with shadows from existing structures. New shadows from the project would begin to occur during mid-morning and would continue through most of the day; primary shadow effects would be on the portions of Washington and Montgomery Sts. adjacent to the site. Portions of the widened sidewalk and seating area on the north side of the Transamerica Pyramid would be shaded by the project in the late afternoon at all seasons of the year.

During the mid-morning hours in the winter months the project would complete the shading of Columbus Ave. from Washington St. to Pacific Ave., eliminating the existing corridor of sunlight between shadows cast by the 601 Montgomery St. building and Transamerica Pyramid. Towards midday the project would eliminate the existing corridor of sunlight between the shadows of the Holiday Inn and 601 Montgomery St. building, shading Washington St. adjacent to the site, and Montgomery St., north to Jackson St. (see Figure 22). Shadows from the project would eliminate this existing corridor of sunlight throughout the day, completing the shading of portions of Montgomery and Sansome Sts. in the late afternoon hours. The project would contribute to shading portions of the widened sidewalk area on the north side of the Transamerica Pyramid in the late afternoon (see Figure 22).

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I. SUMMARY

A. PROJECT DESCRIPTION

The project sponsor, Crow-Spieker Companies of San Francisco, doing business as Trammell Crow Company, proposes to construct a 24-story combined office and residential building in the northwestern Financial District. The site is bounded by Washington St. on the north, Montgomery St. on the east, Merchant St. on the south, and the Chinatown Holiday Inn on the west. The project is intended to satisfy some of the existing demand for both office space and housing in San Francisco.

The proposed building would be 300 ft. high with about 331,700 gross sq. ft. of floor area. The project would contain ground floor retail and restaurant space, 15 floors of office space, and six floors of residential space. Gross floor area of the commercial portion of the building would be approximately 243,600 sq. ft. Project plans include approximately 88,100 gross sq. ft. of residential space.

The ground floor would contain separate office and residential lobbies and about 4,000 sq. ft. of retail and restaurant space. The second floor with mezzanine would provide about 25,000 sq. ft. of parking space, accommodating about 62 vehicles. The third through 17th floors would contain about 236,600 gross sq. ft. of office space. The 18th floor would be a transition floor between the office and residential portions of the building. It would contain mechanical service areas, an athletic/health club and residential common area, and residential space. The residential space on the transition floor would contain the lower portions of the townhouse units with entrances on the first residential floor. The six floors from the 19th through the 24th would be occupied by about 40 residential condominiums.

The first residential floor would contain a patio and pool area in the southwest corner, as common open space. Most residential units would have a private balcony or terrace. There would also be rooftop open space and a mechanical penthouse.

The project site contains about 17,400 sq. ft., consisting of Lots 2, 3, 4 and 25 of Assessor's Block (A/B) 208. The site is currently occupied by a surface parking lot, a one-story brick structure at 639 Montgomery St., a two-story brick structure at 643 Montgomery St. and a fenced-in, vacant lot. The project would result in the demolition of the existing structures on the site.

B. ENVIRONMENTAL EFFECTS

The project tower, proposed to be 300 ft. tall, would be the maximum height permitted, as the site is located in the 300-H Height and Bulk district. The proposed project would comply with the height and bulk restrictions which apply within this district. The building length would be about 130 ft., 40 ft. less than the permitted maximum of 170 ft. The diagonal dimension of 180 ft. would be about 20 ft. less than the maximum of 200 ft. Changes in the existing height and bulk controls are being studied by the Planning Commission. The project in relation to proposed changes is discussed in Sections IV., Environmental Impact - Land Use, and VII., Alternatives, related to Guiding Downtown Development proposals.

Gross floor area of the office lobby, retail, restaurant and office space would be approximately 243,600 sq. ft., a Basic Floor Area Ratio (FAR) of about 14:1. The project plans include 88,100 gross sq. ft. of housing, an FAR of approximately 5.1:1. The total gross floor area for the building would be approximately 331,700 sq. ft., an FAR of about 19.1:1. The square footage of the proposed residential units would cause the building to exceed the allowable Basic 14:1 FAR for a structure in the C-3-0 district.

The use of development bonuses, described in Section 126 of the City Planning Code, would permit space in addition to the Basic FAR. Permitted bonus space could be used for, and would be limited to, housing under the existing Interim

Controls on downtown high-rise office development. The project sponsor intends to request approximately 83,700 sq. ft. of bonus floor area. This bonus space would be based upon provision of multiple building entrances, shortened walking distances, sidewalk widening, a rooftop observation deck and parking access. Bonus space identified by the project sponsor could allow a total gross floor area for the building of about 327,300 sq. ft., for an FAR of about 18.8:1. The project proposes a total of 88,100 sq. ft. of residential space, about 4,400 sq. ft. more than the identified bonuses would allow. Because the project would exceed the allowable FAR of 14:1 plus identified bonus space, it would not conform to the City Planning Code. An amendment to the City Planning Code, and possibly a change in the Interim Controls, would be required to allow approval of the project. According to the Department of City Planning housing formula, the project would generate demand for about 210 units of housing in San Francisco; the project would provide about 40 on-site residential units, containing about 90 bedrooms.

The proposed project would be stepped down in its upper northeast and southeast-facing facades. The architect intends the design to visually complement adjacent buildings and provide a transition between nearby high-rises and the smaller structures of the Jackson Square Historic District to the north and northeast.

The project would be visible in the downtown skyline from some long-range viewpoints. The structure would be visible from Telegraph Hill, obstructing existing views of the 601 Montgomery St. building. From Chinatown, the project would be visible between the Holiday Inn and the 601 Montgomery St. building, obstructing views of lower portions of the Transamerica Pyramid building. When viewed from long-range viewpoints to the northeast, north and west, the project would not be a major visual focus in the downtown panorama due to the prominence of taller structures, such as the Transamerica Pyramid and Bank of America headquarters. The project would not be visible from the southern approaches to the City on the James Lick and Bayshore freeways or from Potrero Hill, due to intervening structures.

The project, in replacing existing low-rise structures, would create a more extended shadow pattern than exists at present, especially north and northeast

of the site. Much of the project shadow pattern would coincide with those shadows cast by existing structures in the area (601 Montgomery St., Holiday Inn, and the Transamerica Pyramid). The project would not shade any existing public parks. Portions of the widened sidewalk and seating area on the north side of the Transamerica Pyramid would be shaded in the late afternoon at all seasons of the year.

The project would change the existing wind environment of the site vicinity. Under northwest wind conditions, the intersection of Clay and Montgomery Sts. would be less windy and gusty than under existing conditions. There would be increased steady winds around the northeast corner of the proposed building, and at the building entrances under the proposed covered walkways.

Under westerly winds, the project would result in stronger winds than now exist, increasing street-level turbulence and gustiness directly east of the proposed building. This turbulence and gustiness would be variable, changing over short distances under the covered pedestrian walkways and at the building entrances on Montgomery St.

The project would result in the demolition of the existing buildings on the site, which include about 3,300 gross sq. ft. of office space, 5,200 gross sq. ft. of restaurant space and 7,300 gross sq. ft. of parking space. Upon completion, the project would result in a net increase of about 233,300 gross sq. ft. of office space, 88,100 square feet of residential space and 17,700 gross sq. ft. of parking space, and the net loss of about 1,200 gross sq. ft. of restaurant/retail space. The project would provide about 40 on-site residential units.

The net increase in employment at the site upon project completion would be about 950 permanent jobs. Secondary employment impacts would result from permanent project employment; about 1,140 additional jobs in other sectors of the Bay Area economy would result. The project would require about 300 person-years of construction labor, an average of about 150 full-time jobs throughout the nearly two-year construction period. About 480 additional labor-years of employment would be generated in the Bay Area as a result of the multiplier effect of project construction.

I. Summary

The project would increase traffic volumes on the freeway feeder streets, and on streets near the proposed project, above projected 1984 peak-hour traffic levels by no more than 2% on any of the freeway approach streets. The impact of the project would be an imperceptible lessening of the Level of Service of traffic operation on the street system. The level of operation would not be decreased by more than 1% of the 1984 base conditions by project traffic. Service vehicle access would be on the second floor parking level of the building, by ramp from Merchant St. Project demand would be for about four loading spaces. The project would not be able to meet its average demand for loading space with off-street loading facilities. The existing loading zones on the Montgomery St. frontage would be able to handle the excess demand.

Of the 53 Muni lines serving the Downtown San Francisco area, 36 operate within a walking distance of 2,000 ft. of the site. Considering trips to be generated by cumulative development in the Downtown, it is estimated that in 1984, 26 of these lines would operate during the p.m. peak hour beyond maximum recommended capacity (beyond 150% of seated capacity). The project would contribute about 220 peak-hour trips to these lines, a less than 1% increase.

Air quality impacts associated with operation of the project would result primarily from vehicle emissions. Implementation of the project would add to local and regional accumulations of pollutants during adverse meteorological conditions. The project would probably have no measurable impact on citywide or regional air pollutant concentrations nor on the frequency of violations of the standards.

Estimated total energy use for the project would be 175,000 Btu at-source per sq. ft. per year. The internal heat generated by the project would be reclaimed by the use of a small fan/coil unit at each floor which would deliver warm air to the building perimeter to replace heat lost through the building skin. Waste heat from office lights and computer rooms would be used to augment heating needs for the condominiums.

Construction activities would temporarily increase noise levels in the site vicinity. The project would be expected to use a mat (cellular) foundation, which would not require pile driving.

The presence of about 40 condominium apartments in the northwest corner of the City's Financial District could generate a demand for domestic retail services. To the extent that they are not located within the project, new facilities could be induced to locate in the vicinity. The placement of residential units in this location could encourage other new developments in the Financial District to include housing.

C. MITIGATION MEASURES

Primary mitigation measures proposed as part of the project include:

- The project sponsor would urge the Board of Supervisors that the portion of the proceeds from the sale of Lot 25, which represents the difference between the actual acquisition costs for the property and the sale price, be used to purchase land for open space in Chinatown.
- The project would include pedestrian-scale retail activity and widened sidewalks to improve pedestrian access to work, shopping and transit facilities, and to contribute to a visually interesting streetscape. Ground-floor commercial activity would include a combination of uses such as a restaurant, apparel store, stationery store and/or travel agency. Retail space would not include any financial institutions although an automatic banking terminal may be provided.
- The project would include street trees and sidewalk plantings on Montgomery and Washington Sts. The entry plazas, residential lobby, and pool area would be landscaped. Street-side glass walls, vegetation, or other screening would be used to provide pedestrian protection at the covered walkway area and to modify the project's wind effects on pedestrians.

I. Summary

- The project's sculptured upper-level facades would reduce the apparent scale and bulk of the building, and may provide visual interest to viewers from Telegraph Hill, Columbus Ave. and the Jackson Square Historic District.
- The project sponsor would use a decorative paving material on the Merchant St. sidewalk fronting the site to enhance pedestrian interest, and would consider installing decorative paving on Merchant St.
- The project would contain about 40 residential condominiums. Units would vary from 1,200 to 2,400 sq.ft., providing a range in size. Project housing would partially mitigate increased demands on the City's housing supply expected to be generated by the project's office development.
- The project sponsor would participate proportionately in whatever legal means is finally adopted by the Board of Supervisors for an established Downtown transit assessment district to meet the peak demands caused by cumulative office development in the Downtown area.
- A transportation broker in the project management office would encourage transit use through the sale on-site of BART and Muni passes to employees, and facilitation of employee carpool and vanpool systems in cooperation with RIDES for Bay Area Commuters.
- Secure bicycle parking facilities would be provided to encourage the use of bicycles by employees and messengers. Handicapped parking and handicapped access facilities would be provided in the proposed parking garage.
- The building would have "eyebolt" fixtures on the Montgomery and Washington St. frontages suitable for suspending Muni trolley wires.
- Upon project completion, the project sponsor would encourage tenant firms to implement a flexible time ("flex-time") system for employee working hours. (Flex-time is designed to reduce peaks of congestion in the transportation system.)

- The project's heating, ventilating and air conditioning (HVAC) system would be equipped with an economizer cycle to use outside air for cooling, as feasible.
- Wherever possible, office suites would be equipped with individual light switches, time-clock operation and fluorescent lights to conserve electric energy. A centralized management computer system would monitor off-hour (evenings and weekends) heating and air-conditioning use. Tenants would be charged for off-hour heating and air-conditioning service, to encourage energy conservation.
- The project sponsor and project engineer have met with the Energy Conservation Department of the San Francisco Public Utilities Commission to present measures that would be taken to assure energy conservation.

D. ALTERNATIVES TO THE PROPOSED PROJECT

Alternative One would develop a combined office and condominium residential building on the project site which would conform to the City Planning Code and Interim Controls. Alternative One would be similar to the proposed project in height, design, and commercial floor area. This alternative would include about 35 condominiums, five fewer than the proposed project, so that the residential floor area would be consistent with identified bonus space. The impacts of Alternative One would generally be as described for the project. This alternative is under consideration by the project sponsor.

Alternative Two, the no-project alternative, would retain the existing two structures on the project site. The environmental characteristics of this alternative would be substantially the same as with present conditions. Alternative Two has been rejected by the project sponsor because it would not provide additional office space and residential units to meet existing demand in San Francisco, and because it would be an economic underuse of the site.

I. Summary

Alternative Three would consist of an office building, about 215 ft. in height. There would be no housing provided on the site. This alternative would contain about 243,600 gross sq. ft. for an FAR of 14:1. Construction impacts of this alternative would be similar to those of the project. Alternative Three would be about 85 ft. shorter than the project, resulting in decreased visual effects and energy consumption. The project sponsor has rejected this alternative as not contributing housing to partially meet existing demand in San Francisco.

Alternative Four would involve development of a combined office and residential building on three parcels of the project site, excluding Lot 25 at the Washington-Montgomery corner. Alternative Four would contain about 176,000 sq. ft. of office space, for an FAR of 14:1, and would apply allowable bonuses for residential use on the project site. Approximately 43,000 sq. ft. of bonus space has been identified, for an overall floor area of about 219,000 sq. ft. and an FAR of about 17.4:1. This alternative would be about 272 ft. in height. Construction impacts of this alternative would be similar to those of the project. Operational impacts of Alternative Four would be similar to the project, but proportionally less because of the decreased building size. This alternative would result in an open-ended project block as Lot 25 would remain vacant unless subsequently developed. Alternative Four is under consideration by the project sponsor.

Alternative Five would consist of a structure which would comply with development controls recommended in the Department of City Planning document, Guiding Downtown Development. This alternative would involve development of a combined office and residential building on the project site. The structure would contain about 208,800 gross sq. ft. of office space for an FAR of 12:1. Residential use would occupy about 35,000 gross sq. ft. for an additional FAR of 2:1. The overall FAR of Alternative Five would be 14:1 and the building height would be 250 ft. The maximum FAR allowed under the provisions contained in Guiding Downtown Development would be 17:1, including 5:1 for housing, but the proposed height limit of 250 ft. would not permit the development of the maximum FAR for the site. Construction impacts of Alternative Five would be similar to those of the proposed project. This

alternative would be about 50 ft. shorter than the project, resulting in decreased visual effects and energy consumption. The project sponsor has rejected this alternative as not providing the amount of office space permitted under the City Planning Code and proposed for the project. In addition, the project sponsor considers the 250 ft. height limit recommended in Guiding Downtown Development an unnecessary limitation on the development potential of the site.

II. PROJECT DESCRIPTION

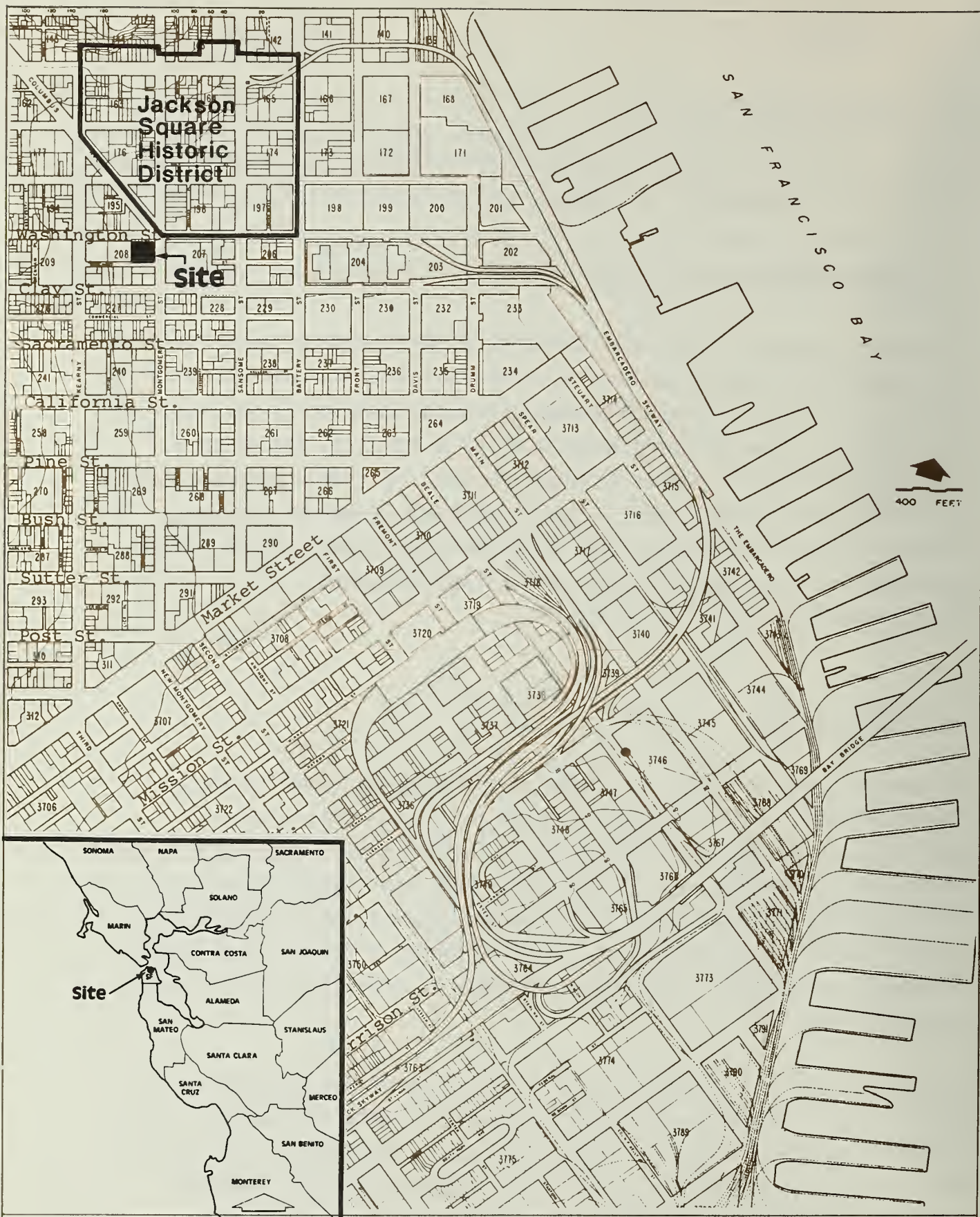
A. PROJECT SPONSOR'S OBJECTIVES

The project sponsor, Crow-Spieker Companies of San Francisco, doing business as Trammell Crow Company, proposes to construct a 24-story combined office and residential building in the northwestern Financial District in San Francisco (see Figure 1). The sponsor's objectives are to construct and manage a high-quality commercial office building, increase the City's housing supply by providing on-site housing, and realize a reasonable return on investment. The project is intended to satisfy some of the existing demand for both office space and housing in San Francisco. The project architect is Kaplan/McLaughlin/Diaz of San Francisco.

B. PROJECT LOCATION

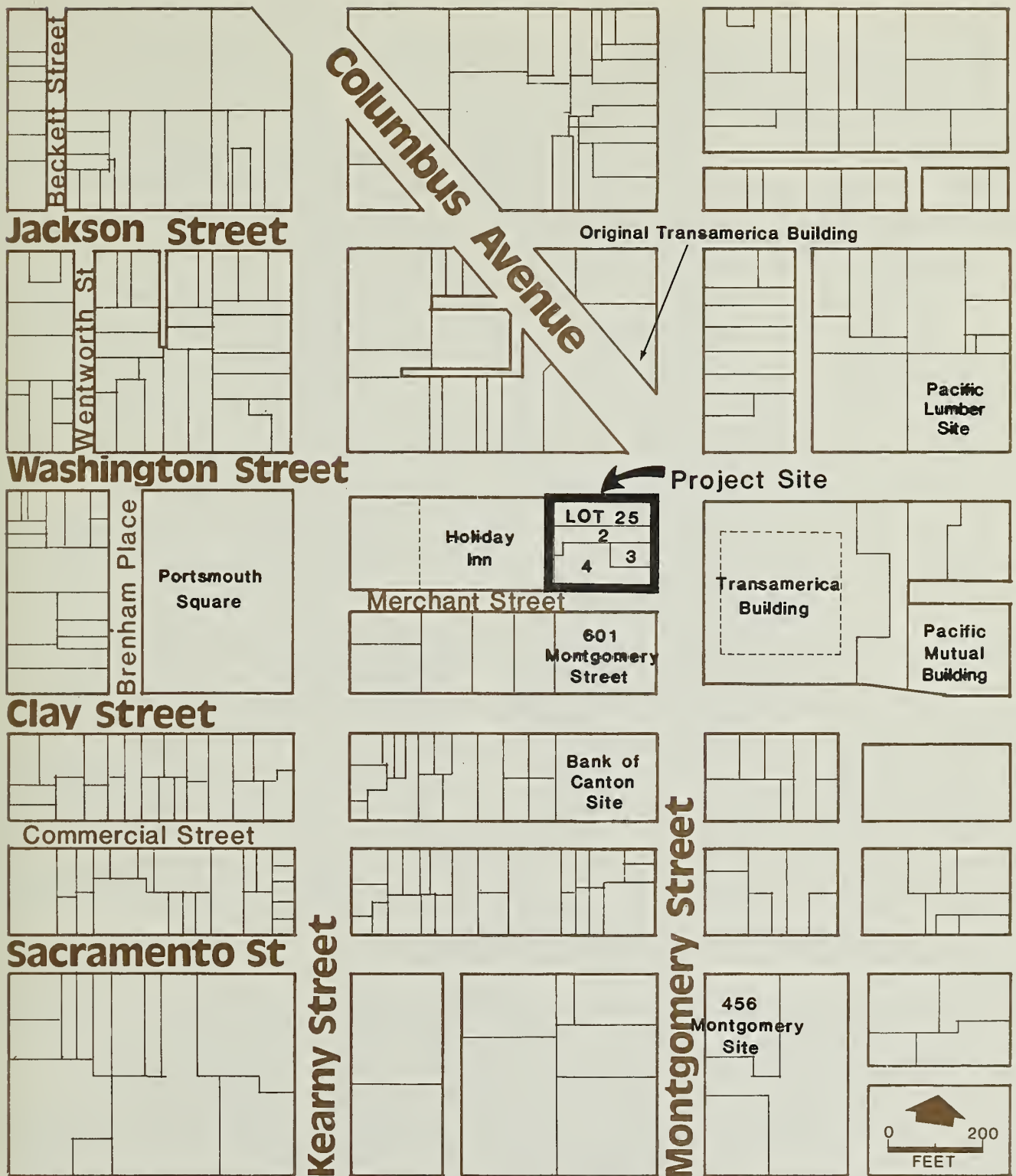
The project site, Lots 2, 3, 4 and 25, at the northeast corner of Assessor's Block (A/B) 208, contains about 17,400 sq. ft. The site is bounded by Washington St. on the north, Montgomery St. on the east, Merchant St. on the south, and the Chinatown Holiday Inn on the west (see Figure 2, p.13). It is located within the northwestern border of the City's C-3-0 (Downtown Office) zoning district. The Transamerica Pyramid building is directly east across Montgomery St. and the 19-story 601 Montgomery St. building is to the south, across Merchant St.

Immediately north and northeast of the site is the Jackson Square Historic District, with the North Beach and Telegraph Hill communities beyond, to the northwest and the northeast, respectively. Approximately one block west of the site lies the Chinatown community. The Golden Gateway residential community is located approximately three blocks northeast of the site.



SOURCE: San Francisco Department of City Planning

Figure 1: Project Location



Legend

Project Location

FIGURE 2: Project Site and Vicinity

SOURCE: Environmental Science Associates, Inc.

C. PROJECT DESCRIPTION

The project would be a 300-ft.-high, 24-story building (see Figure 3), with about 331,700 gross sq. ft. of floor area (excluding foundation, mechanical and parking space). The ground floor would contain separate office and residential lobbies and about 4,000 sq. ft. of retail and restaurant uses (see Figure 4, p. 16). The main entrances to the office and retail portions of the building would be on Montgomery St.; access to the condominium lobby would be on Washington St. The second floor with mezzanine would provide about 25,000 sq. ft. of parking space, accommodating about 62 vehicles, and about 3,300 sq. ft. of loading space, accommodating two service vehicles. Access to both parking and loading docks would be from Merchant St., near the Holiday Inn (see Figure 5, p. 17). The third through 17th floors would contain about 236,600 gross sq. ft. of office space. The average gross floor area for office floors would be about 16,000 sq. ft. (see Figure 6, p. 18). The office, lobby, retail, and parking portions of the building would rise to a height of approximately 216 ft. The 18th floor would be a transition floor between the office and residential portions of the building, containing about 3,100 sq. ft. of mechanical service area, 7,500 sq. ft. of residential space, 3,500 sq. ft. of athletic health club and 1,300 sq. ft. of residential common area (see Figure 7, p. 19). The health club and common area would serve as common facilities for the residents of the building. The residential space on the transition floor would contain the lower portions of the townhouse units with entrances on the first residential floor.

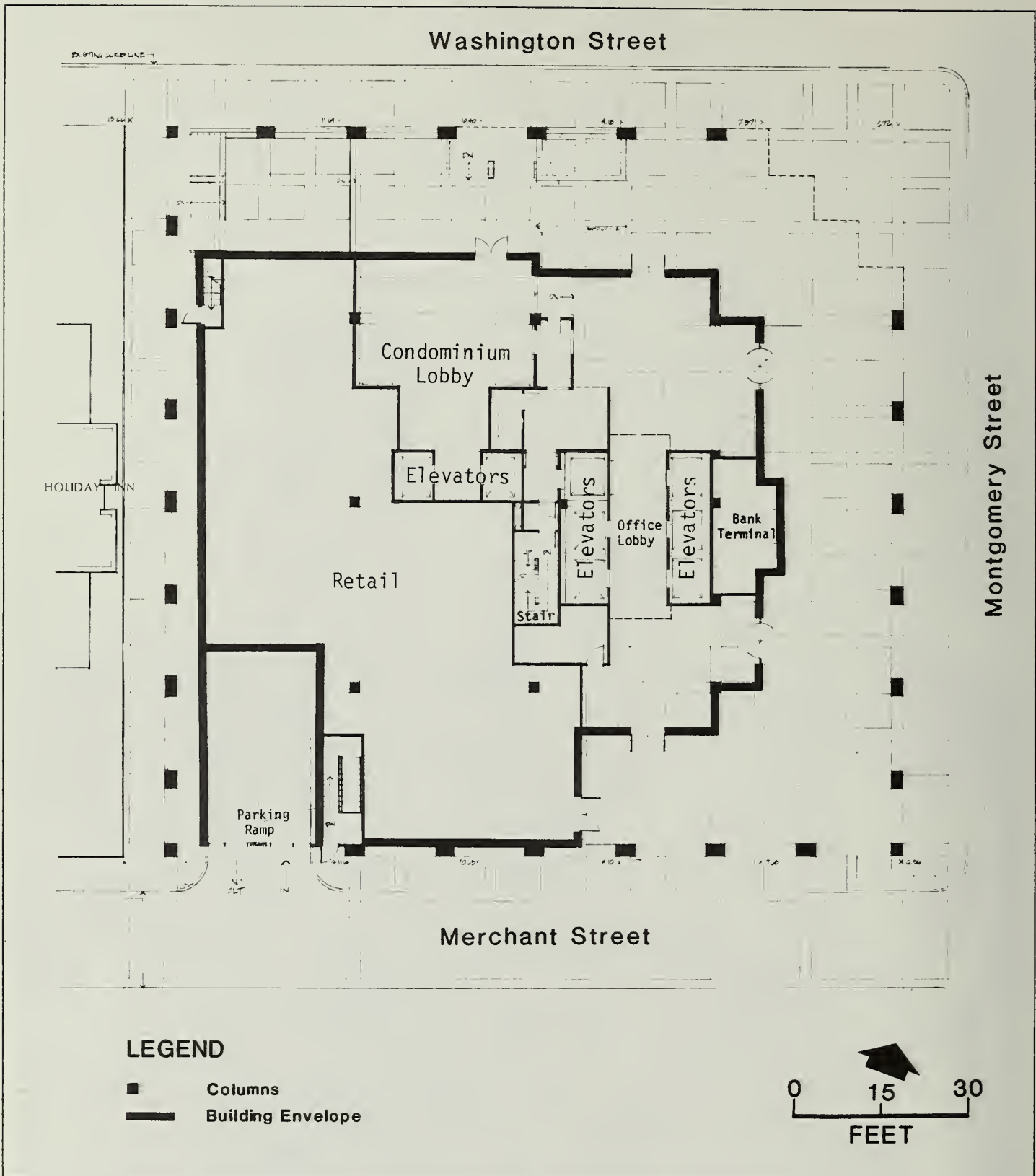
The six floors from the 19th through the 24th would be occupied by about 40 residential condominium units (see Figure 8, p. 20). Gross floor area for the residential portion of the building would be about 88,100 gross sq. ft. About 78,500 sq. ft. would be for the dwelling units; the remainder would include the health club, residential common area and condominium-related mechanical areas (lobby and elevator core). The first residential floor would contain a common patio and pool area, of about 3,100 sq. ft., at the southwest corner. Most residential units would have a private balcony or terrace, for a total of about 4,400 sq. ft. of private open space. There would be rooftop common open space, of about 10,000 sq. ft., and a mechanical penthouse. Total open space proposed as part of the project would be about 17,500 sq. ft.



←Project→

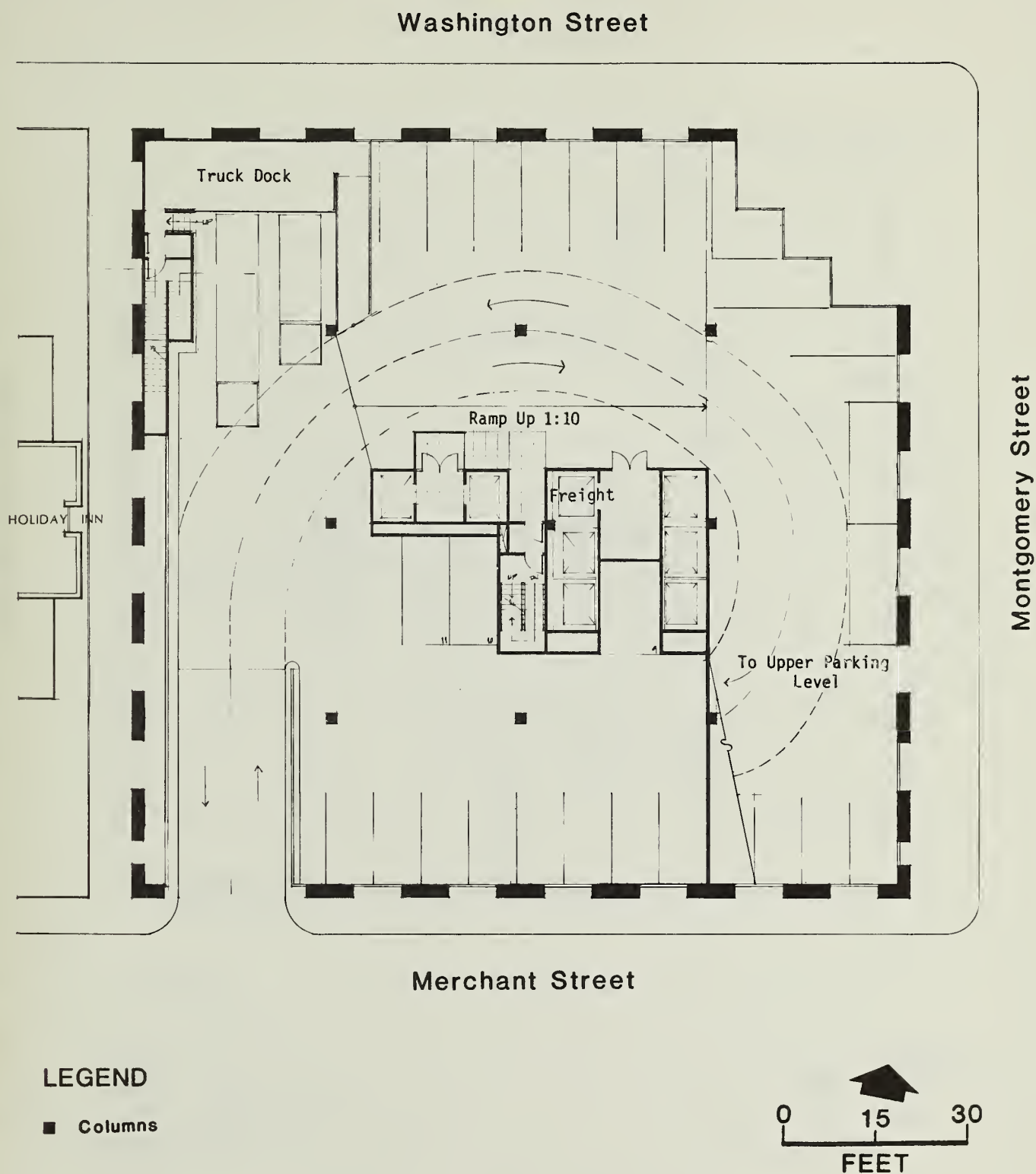
SOURCE: Kaplan/McLaughlin/Diaz

FIGURE 3: Photomontage of Project (View from the North on Montgomery Street)



SOURCE: Kaplan/McLaughlin/Diaz

FIGURE 4: Ground Floor Plan

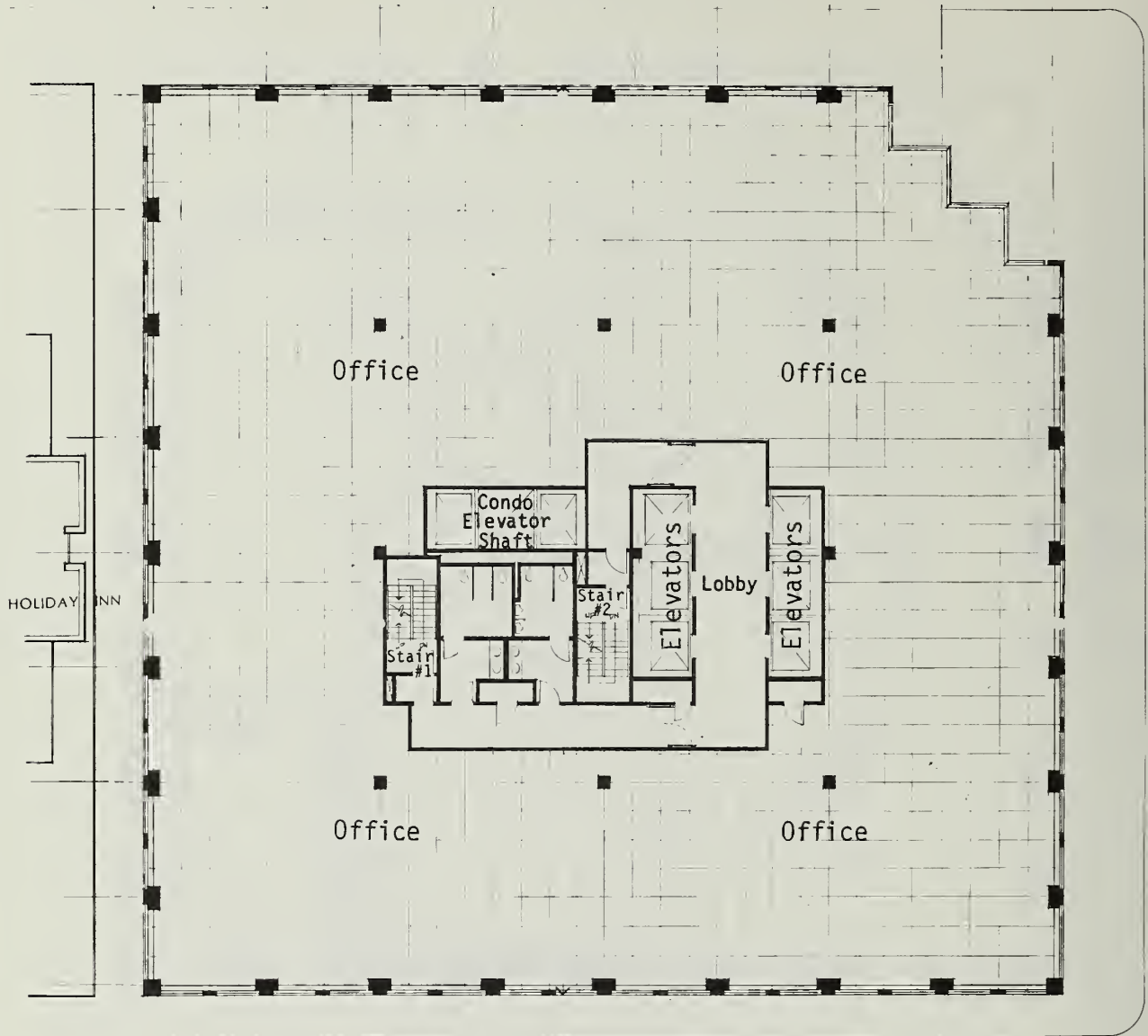


SOURCE: Kaplan/McLaughlin/Diaz

FIGURE 5: Parking Level Plan

Washington Street

Montgomery Street



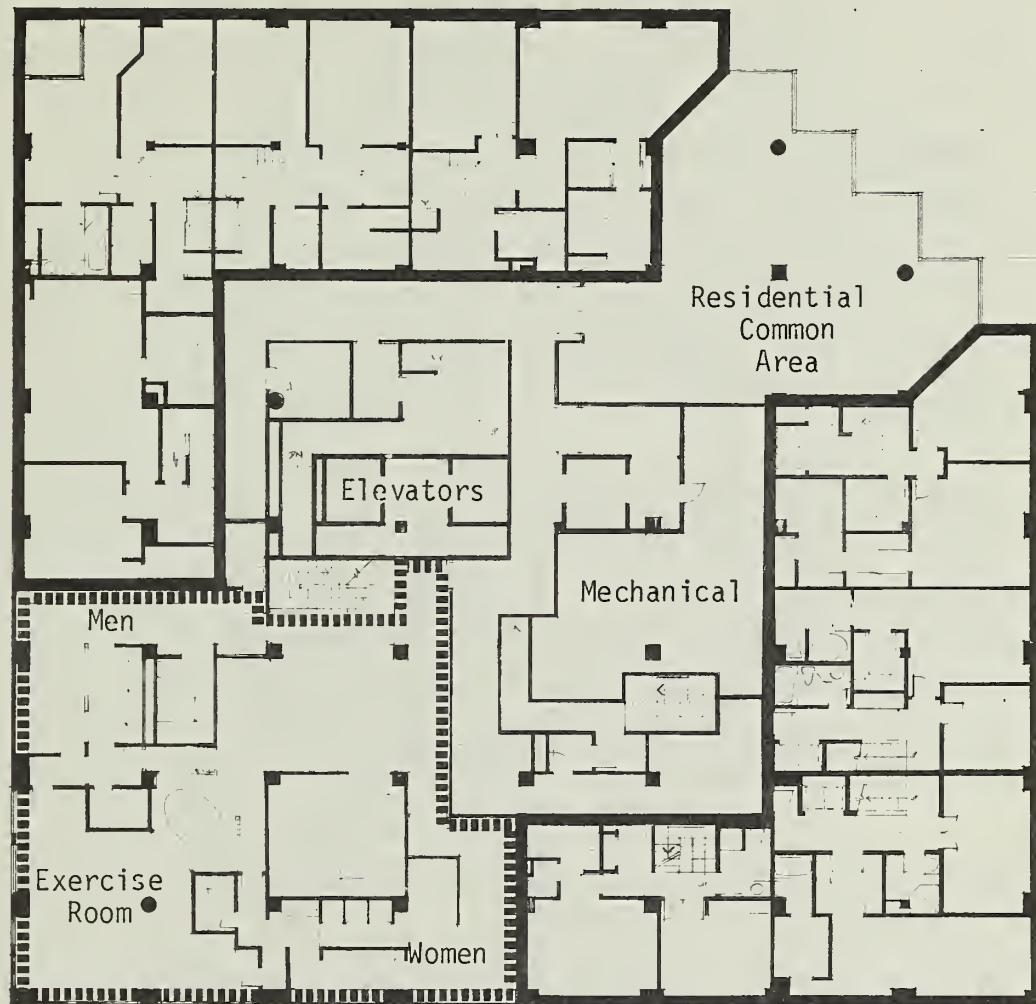
LEGEND

■ Columns



SOURCE: Kaplan/McLaughlin/Diaz

FIGURE 6: Typical Office Floor Plan



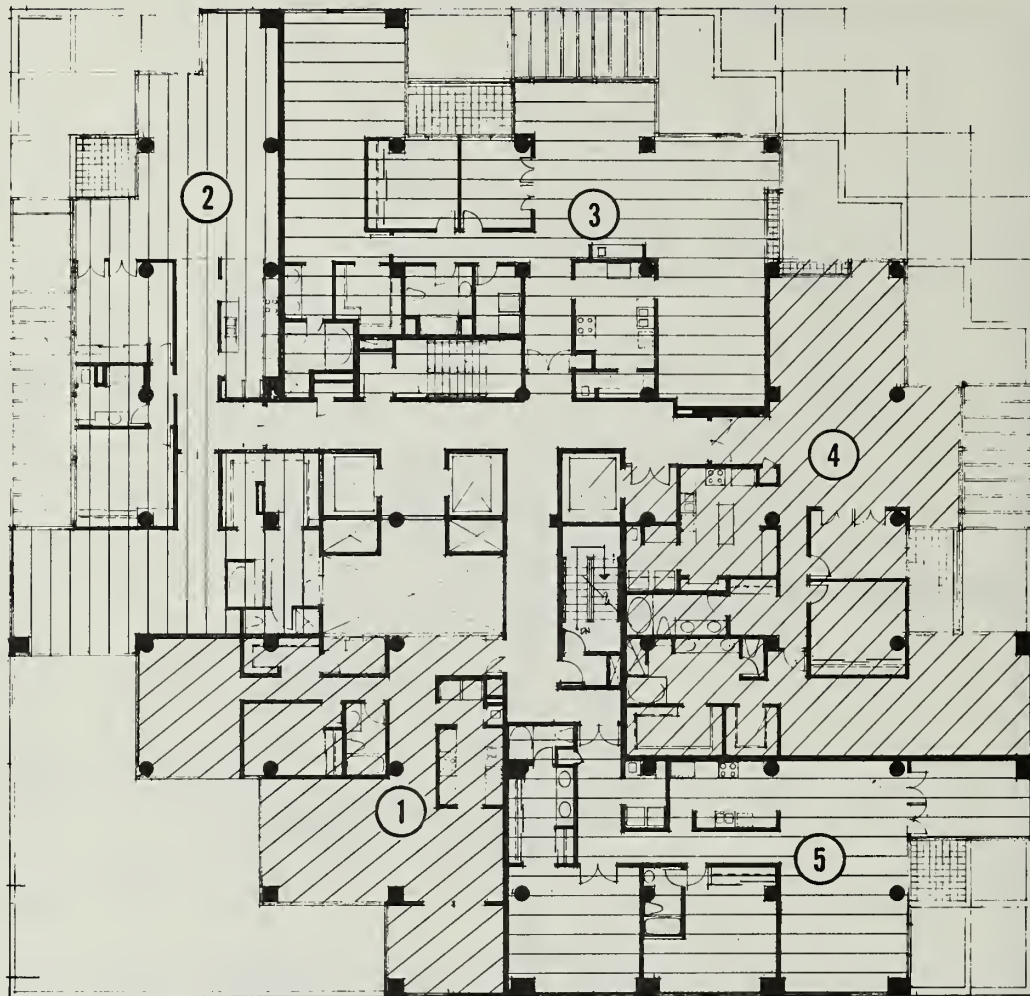
LEGEND

- Columns
- ▤▤▤▤▤▤ Health Club
- ▬ Residential Units
(lower level of townhouses)



SOURCE: Kaplan/McLaughlin/Diaz

FIGURE 7: Transition Floor Plan



LEGEND

① Residential Units



SOURCE: Kaplan/McLaughlin/Diaz

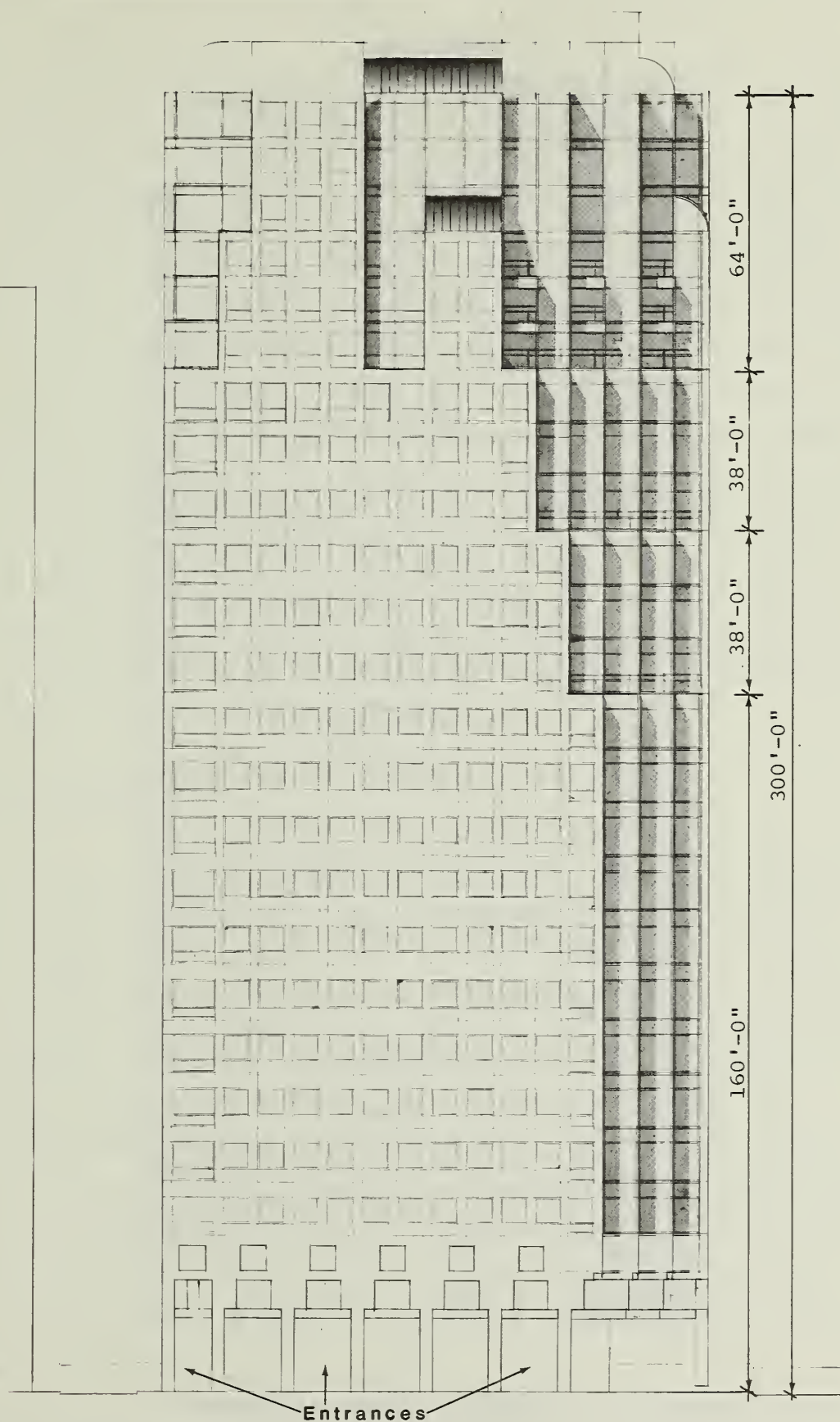
FIGURE 8: Typical Condominium Floor Plan

II. Project Description

The building would be nearly square, with a depth of 130.5 ft. along Washington St. and 126.5 ft. along Montgomery St. The project would total 300 ft. in height (see Figure 9, p. 22). Upper level setbacks would occur on all four corners (see Figures 10 and 11, pp. 23-24), with special emphasis on the corner at Washington and Montgomery Sts., where setbacks are intended to preserve views from upper Columbus Ave (see Figure 20, p.58). The faceted upper-floor setbacks, terracing diagonally across the northeast corner of the site, are further intended by the architect to reduce the apparent bulk and scale of the building as seen from the Jackson Square Historic District and Telegraph Hill. The upper levels of the facade would be composed primarily of metal panels and tinted glass. The building setbacks would be distinguished from the rest of the facade by a combination of opaque and tinted glass.

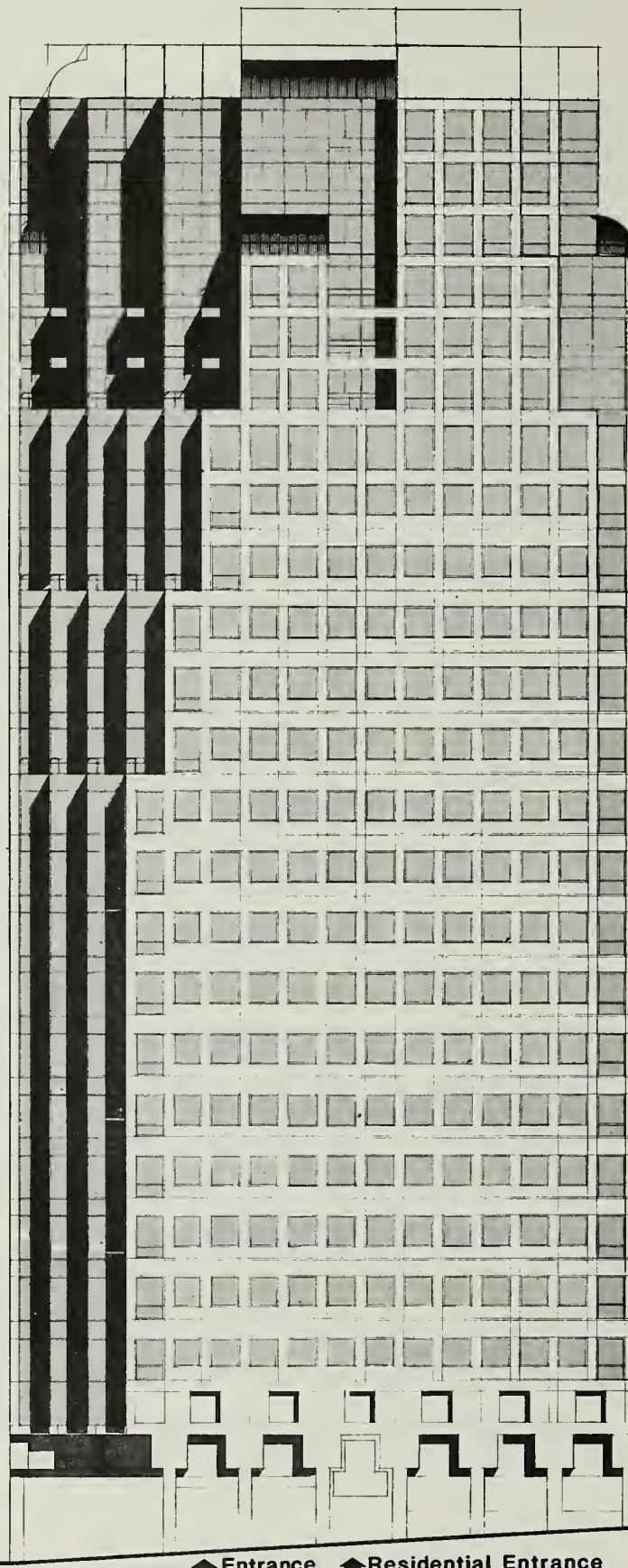
The proposed building would have a ground-floor, pedestrian area with widened sidewalks, multiple building entrances and pedestrian walkways, intended to shorten walking distances from major access points. Street-side glass walls, vegetation, or other screening would be provided at the pedestrian covered walkway area. Street trees and sidewalk plantings would be installed on Washington and Montgomery Sts. The entry plazas, residential lobby and pool area would be landscaped.

Gross floor area of the lobby, retail/restaurant and office space would be approximately 243,600 sq. ft., representing a Floor Area Ratio (FAR) of about 14:1. The project plans include 88,100 gross sq. ft. of housing. The square footage of the proposed residential units would cause the building to exceed the Basic FAR, permitted under Section 124 of the City Planning Code, for a structure in the C-3-0 district. The total gross floor area for the building would be approximately 331,700 sq. ft. (excluding foundation, mechanical, and parking floor area), representing a total project FAR of about 19.1:1. This would exceed the allowable Basic FAR by about 5.1:1 or approximately 88,100 sq. ft.



SOURCE: Kaplan/McLaughlin/Diaz

FIGURE 10: Montgomery Street Elevation
(East Elevation)



▲ Entrance ▲ Residential Entrance

SOURCE: Kaplan/McLaughlin/Diaz

FIGURE 11: Washington Street Elevation
(North Elevation)

II. Project Description

The use of bonuses, described in Section 126 of the City Planning Code, could permit space in addition to the Basic FAR. Permitted bonus space could be used for, and would be limited to, housing under the existing Interim Controls on downtown high-rise office development./1/ The project sponsor intends to request approximately 83,700 sq. ft. of bonus floor area. This bonus space would be based upon provision of multiple building entrances, shortened walking distances, sidewalk widening, a rooftop observation deck and parking access (see Table 1, p. 26). Identified bonus space would result in a total gross floor area for the building of about 327,300 sq. ft., an FAR of about 18.8:1. The project proposes a total of 88,100 sq. ft. of residential space, about 4,400 sq. ft. more than the identified bonuses would allow. Because it would exceed the allowable FAR of 14:1 plus bonus space, it would not conform to the City Planning Code. Therefore, the City Planning Commission could not approve the project as proposed. An amendment to the City Planning Code, and possibly a change in the Interim Controls, would be required to allow approval of the project. There are a number of ways in which the Planning Code or Interim Controls could be modified to permit the amount of on-site housing proposed (see Section IV, Land Use, p. 46).

D. PROJECT OCCUPANCY

The project sponsor proposes to lease approximately 4,000 sq. ft. of ground floor retail space, which is expected to accommodate about four tenants. Commercial retail activities may include uses such as a restaurant, apparel store, stationery store and/or travel agency. Ground-floor retail space would not include any financial institutions, although an automated banking terminal may be provided. Approximately 200,000 net sq. ft. of office space is expected to be leased to about 50 tenants. Tenants are expected to be lawyers, accountants, professional business service and financial service companies. The sponsor anticipates that most tenant firms would have a larger proportion of management and professional/technical staff than clerical staff. The project sponsor would manage and maintain the proposed building and service tenants through a permanent, full-time, on-site management team.

TABLE 1: PROJECT CHARACTERISTICS

NUMBER OF STORIES		HEIGHT AND BULK MEASUREMENTS		
Lobby/Retail	1		<u>Proposed</u>	<u>Permitted*</u>
Parking:	1	Height:	300 ft.	300 ft.
Office:	15	Length:	130 ft.	170 ft.
Mechanical:	1	Diagonal		
Residential:	<u>6</u>	Dimension:	180 ft.	200 ft.
Total Stories	24			

GROSS FLOOR AREA PROPOSED			
<u>Office</u>	<u>sq. ft.</u>	<u>Residential</u>	<u>sq. ft.</u>
Office Lobby:	3,000	Residential Units:	78,500
Rest./Retail:	4,000	Health Club and Common Area	4,900
Office Space:	<u>236,600</u>	Residential Lobby:	1,300
		Residential Elevator Shaft:	<u>3,400</u>
<u>Total Office:</u>	243,600	<u>Total Residential:</u>	88,100

REQUESTED BONUS SPACE (Section 126 of the City Planning Code)	
Multiple Building Entrances	12,200 sq. ft.
Sidewalk Widening	36,500 sq. ft.
Shortened Walking Distances	19,800 sq. ft.
Observation Deck	10,000 sq. ft.
Parking Access	<u>5,200 sq. ft.</u>
Total Bonus Floor Area	83,700 sq. ft.

FLOOR AREA CALCULATIONS	<u>Floor Area</u>	<u>FAR</u>
Basic Permitted**	243,600 sq. ft.	14.0:1
Bonus Space Requested	83,700 sq. ft.	4.8:1
Total Permitted by Code	327,300 sq. ft.	18.8:1
Proposed Project	331,700 sq. ft.	19.1:1

*Section 270 of the City Planning Code

**Section 124 of the City Planning Code

SOURCE: Environmental Science Associates, Inc.

II. Project Description

E. PROJECT SCHEDULE, COST AND APPROVAL REQUIREMENTS

PROJECT SCHEDULE

Detailed project design is scheduled by the sponsor for completion in early 1982. Demolition and site clearance are anticipated to require approximately one month; excavation one month; foundation preparation four months; steel erection five months; and exterior and interior finishing nine months. Interior finishing would be completed within 18 months from the initiation of project construction. Initial project occupancy is scheduled for mid- to late 1984, with full occupancy expected in late 1984 or early 1985./2/

COST

Project development costs would be about \$50 million in 1981 dollars, including \$10 million for land, \$1.3 million for design, engineering and environmental review, \$25 million for basic construction, \$3.5 million for interior finishing and \$10 million for interim financing and miscellaneous costs. Ground-floor retail space is expected to rent for approximately \$50 per sq. ft. per year. Office space is expected to rent for approximately \$35 per sq. ft. per year. Residential units are expected to sell for about \$300 per sq. ft., or from about \$300,000 to 350,000 in 1981 dollars./3/

APPROVAL REQUIREMENTS

Following a public hearing before the City Planning Commission, responses to all written and oral comments will be prepared, and this EIR will be revised as appropriate and presented to the City Planning Commission for certification, as to accuracy and completeness. No permits may be issued until the Final EIR is certified.

Because the project would exceed the allowable FAR of 14:1 plus identified bonus space, it would not conform to the City Planning Code. Therefore, the City Planning Commission could not approve the project as proposed. An amendment of the City Planning Code, and possibly a change in the Interim Controls, would be required to allow approval of the project.

II. Project Description

The provisions of the City Planning Code are administered by the Zoning Administrator and other staff members of the Department of City Planning. The Zoning Administrator is responsible for recommending appropriate changes in the Code to the City Planning Commission. According to Section 302 of the Code, an amendment may be initiated by the Board of Supervisors or by a resolution of intention by the City Planning Commission. An interested property owner may not initiate changes in the text of the Code. The City Planning Commission is required to hold a hearing on any proposed amendment. Following a public hearing, the Planning Commission may approve an amendment if it finds that, "the public necessity, convenience and general welfare require the proposed amendment." Once approved by the City Planning Commission, a proposed amendment must be presented to the Board of Supervisors and the Board must adopt the amendment by a majority vote. The City Planning Commission could not act on approval of the proposed project until an amendment to the Planning Code, and possibly a change in the Interim Controls, allowing residential floor area in excess of the amount presently permitted under the Interim Controls, were approved by the Board of Supervisors. Possible modifications of the Code, and a change in the Interim Controls, to permit this project are discussed in Section IV, Land Use, p.46.

Under its policy of Discretionary Review of all downtown high-rise buildings during the period of Interim Controls on the use of floor area bonuses, the City Planning Commission would review the building design and its environmental context in detail and after a public hearing would adopt a resolution approving, approving with conditions, or disapproving the project./1/ A Conditional Use authorization would be required by the Interim Controls to permit the use of bonus floor area for residential use on the site. Following project approval by the City Planning Commission, the project sponsor would obtain demolition, building, and related permits from the Central Permit Bureau of the Department of Public Works. Under the State Subdivision Map Act and the City Subdivision Code, preparation and approval of a subdivision map would be required for the proposed residential development.

NOTES - Project Description

/1/ City Planning Commission Resolution No. 8474, January 17, 1980. Board of Supervisors Ordinance 240-80, June 1, 1980, established the interim limitations on use of bonuses in effect until July 1, 1981. This ordinance was extended, in June 1981, until September 1, 1981 and, subsequently, until March 4, 1982.

/2/ Patrick Gilligan, Crow-Spieker Companies, oral communication, August 24, 1981

/3/ Patrick Gilligan, Crow-Spieker Companies, letter communication, August 6, 1981.

III. ENVIRONMENTAL SETTING

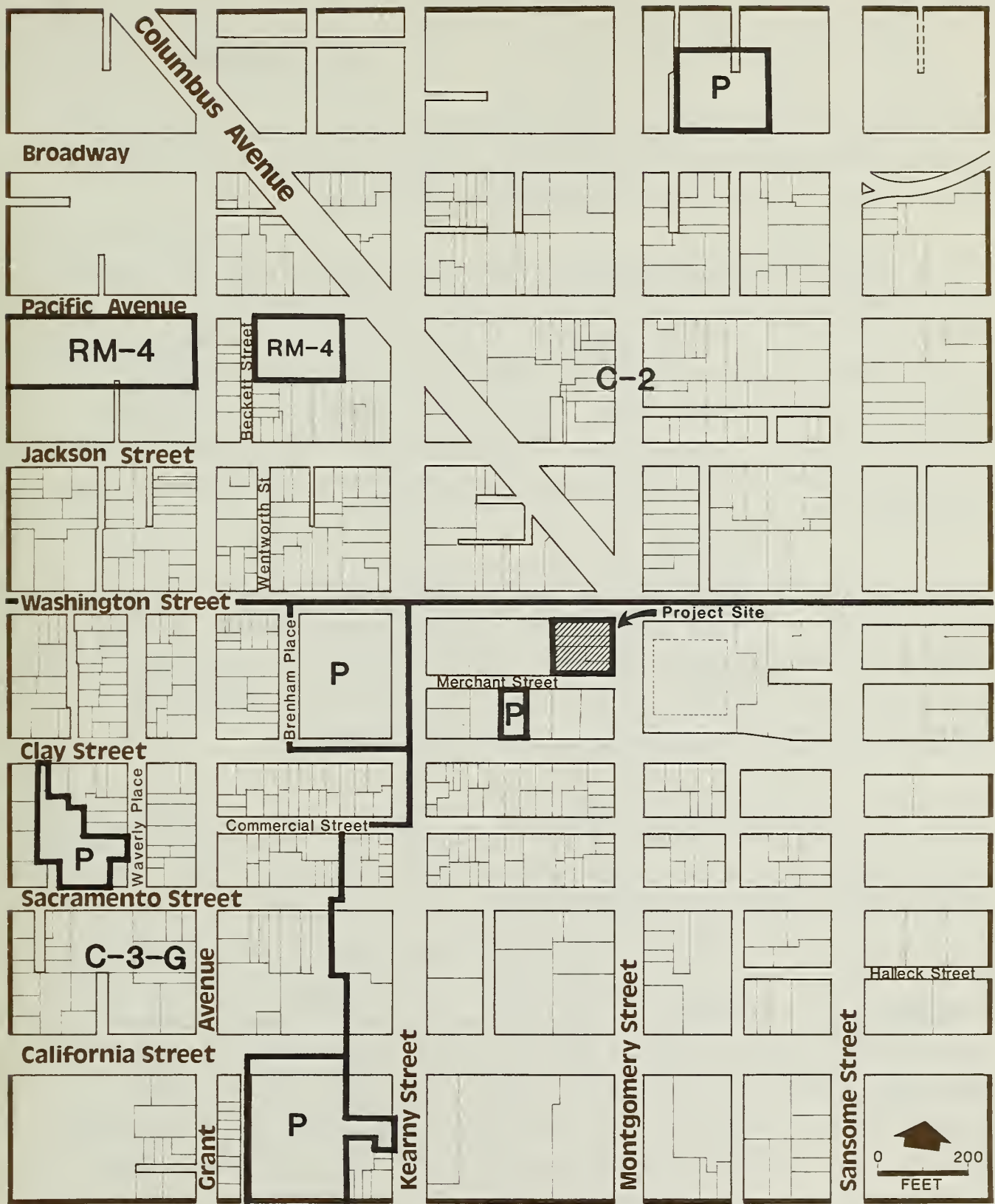
A. LAND USE AND ZONING

LAND USE

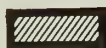
The site is within the northern border of the City's C-3-0 (Downtown Office) zoning district and is surrounded by several districts with differing land-use characteristics (see Figure 12). San Francisco's Financial District, which became known as the "Wall Street of the West" during the 1930's, lies south of the project site. The Financial District contains a combination of early 20th-century banking and office facilities, and most of the City's more recent high-rise office development. The 850-ft. Transamerica Pyramid and 280-ft. 601 Montgomery St. high-rise office buildings are located immediately east and south, respectively, of the project site.

The smaller-scaled Jackson Square Historic District, which includes restaurants, bars, antique shops and professional offices, lies immediately north and northeast of the site (see Figure 1, p.12). Buildings in the Jackson Square Historic District in the site vicinity are two to four stories in height and many are in office use with ground floor retail establishments, such as the office supply company located at 1 Columbus Ave. and the lunch shop at 700 Montgomery St. The residential Telegraph Hill District is north of the site beyond the Broadway entertainment strip. The North Beach area, with restaurants, bars and cafes, continues the scale of the Jackson Square Historic District northwest of the site. Directly west of the site, residential and commercial land uses are intermixed to form the Chinatown community. Embarcadero Center is to the southeast.

The site lies between Chinatown and Embarcadero Center; Washington St. serves as a pedestrian corridor between these two areas. The Holiday Inn, on Lot 24 of Assessor's Block 208, directly west of the site, serves as an entrance to Chinatown. The Holiday Inn was constructed in 1972 under the condition that



Legend



Project Location

Districts

- C-3-0 Downtown Office Districts
- C-3-G Downtown Office Commercial District
- C-2 Community Business District
- RM-4 Residential Mixed District
- P Public Use District

FIGURE 12: Planning Code Use Districts

SOURCE: Department of City Planning, S.F.

III. Environmental Setting

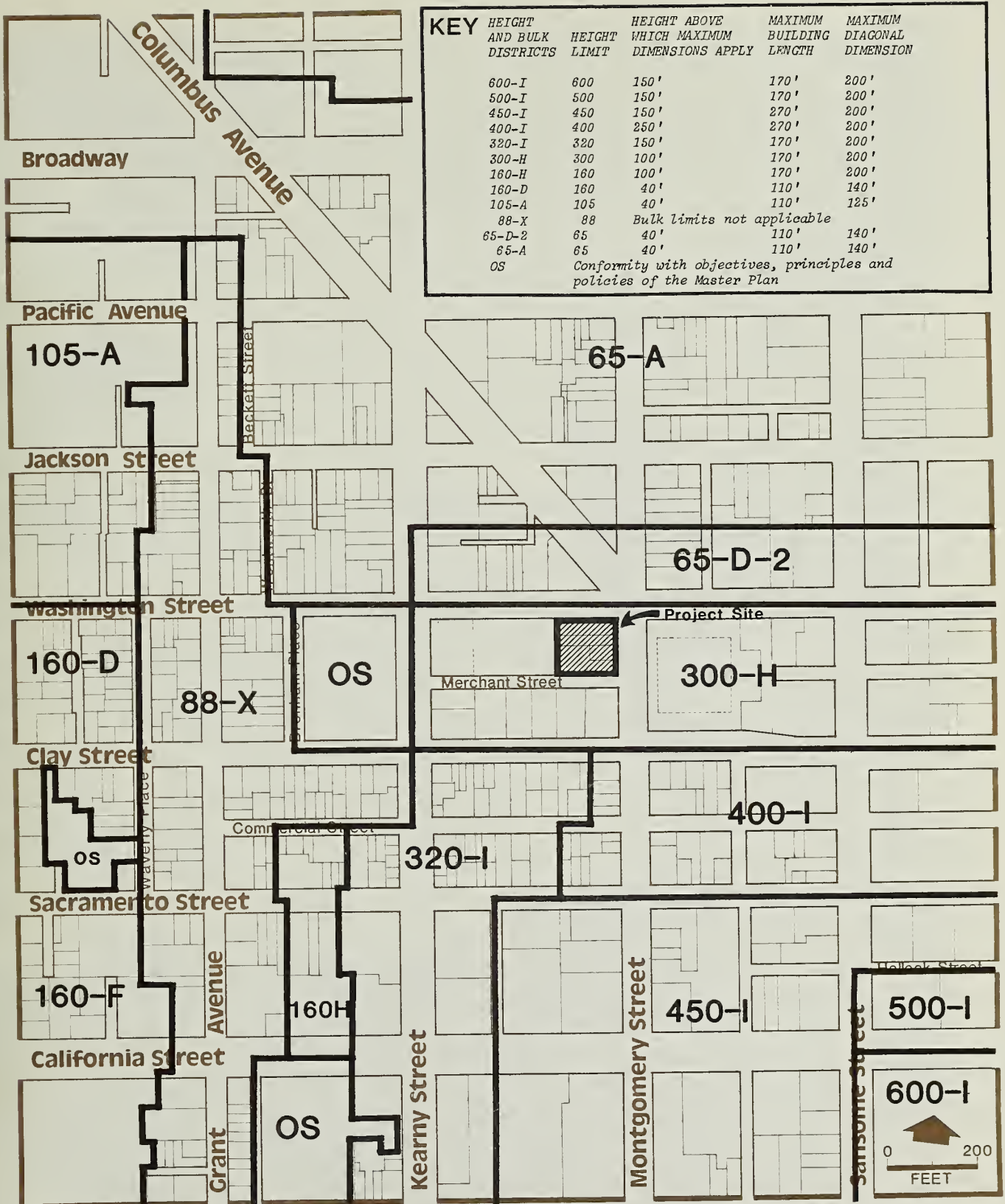
portions of its lobby serve as a Chinese Cultural Center. A pedestrian bridge extends from the Holiday Inn over Kearny St. into Portsmouth Square, making that building accessible to the community to the west.

Of the four parcels comprising the project site, three are owned or controlled by the project sponsor. Lot 25, at the corner of Washington and Montgomery Sts., is in City ownership (see Figure 2, p.13). Lot 25 was originally part of six separate lots which were acquired by the City's Department of Public Works (DPW). Portions of the land were used to widen Washington St.; the remainder was subsequently declared to be surplus by DPW. Lot 25 is presently vacant, partially excavated and covered with debris, grass and weeds.

The site is in the 300-H Height and Bulk District (see Figure 13). Above a height of 100 ft. the maximum permitted building length is 170 ft. and the maximum permitted diagonal dimension is 200 ft. The maximum permitted building height is 300 ft. The site is in the Garment Shop Special Use District as defined in Section 236 of the City Planning Code.

The site is located immediately south and southwest of the Jackson Square Historic District the southern part of which, according to Section 263.1 of the City Planning Code, is classified as a "special exception" height zone. In this 65-D-2 height and bulk district, "height exceptions may be approved by the City Planning Commission in appropriate cases, up to but not to exceed a height of 200 ft." This zoning designation allows the southern edge of Jackson Square to serve as a transitional height zone, to produce a stepping down of height from the Downtown Office district to the smaller structures in the Jackson Square and Telegraph Hill areas. The 108-ft. Pacific Lumber Company Building, presently under construction on the corner of Washington and Sansome Sts., is an example of the transition which may be provided by this particular height district (see Figure 2, p.13).

There are a number of other buildings proposed or approved within three blocks of the project site. The proposed Bank of Canton building, which would contain about 19 floors of office space, would be located one block south of the site at Montgomery and Clay Sts. and a 24-story office building has been



Legend



Project Location

FIGURE 13: Planning Code Height and Bulk Districts

Source: Department of City Planning, S.F.

approved at 456 Montgomery St. (see Figure 2, p.13). A seven-story office building is proposed at the corner of Washington and Battery Sts., two blocks east of the site, and the 25-story DAON office building, at Battery and Sacramento Sts., about three blocks southwest of the site, is currently under construction.

B. URBAN DESIGN

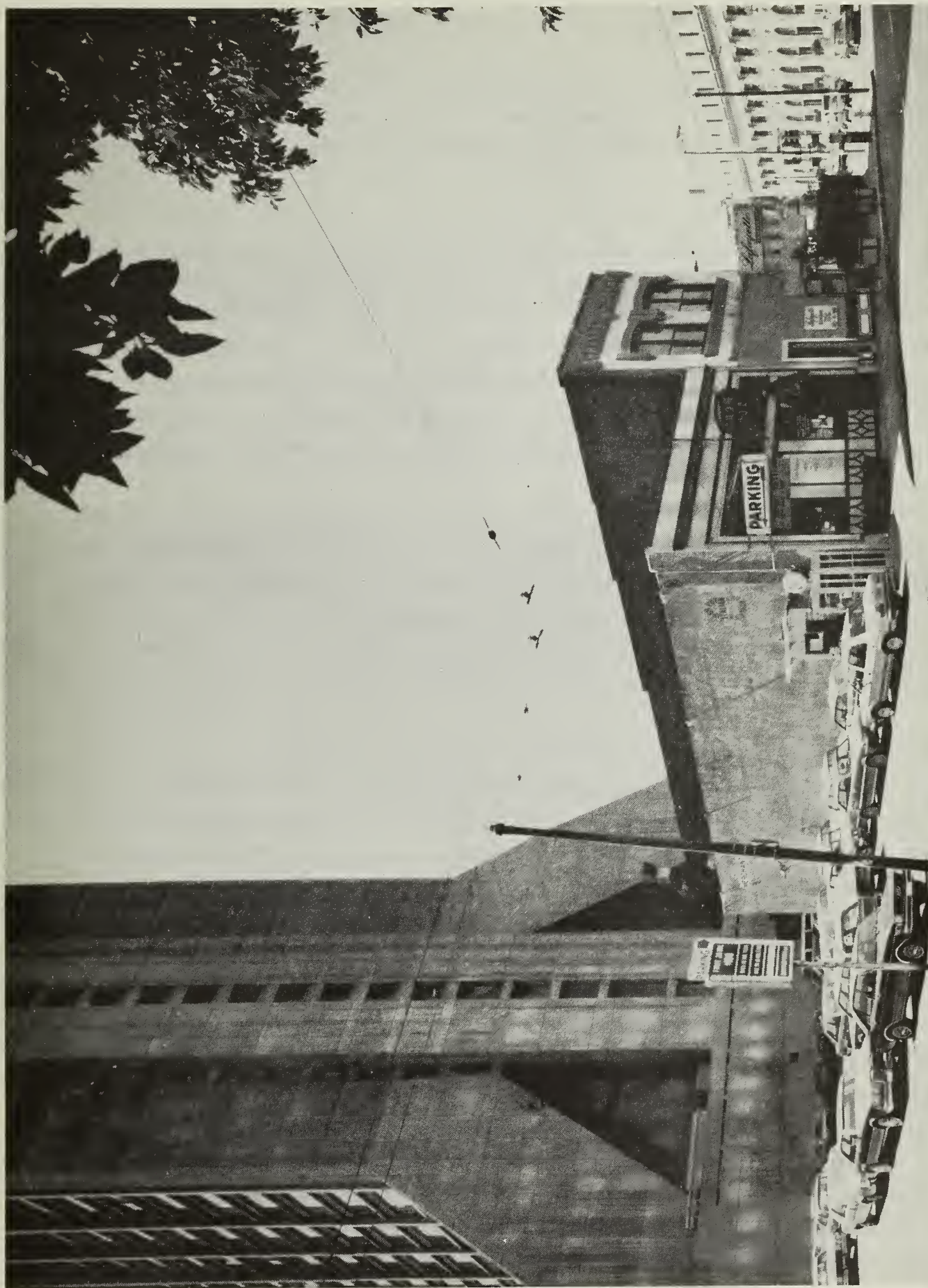
VISUAL ASPECTS

The project site, occupied by a surface parking lot, a one-story and a two-story brick structure, and a fenced-in vacant lot, is generally level and contains no landscaping or distinct topographic features.

The structures front on Montgomery St. and provide a visual focus when the site is viewed from the east. From nearby locations to the south, views of the site are oriented towards the parking lot and the blank walls of the existing buildings, and extend through or over the site (see Figure 14). Views from the north include the wooden fence along the frontage of the vacant lot. The blank wall of the existing 2-story building, containing two billboards, projects above the fence; the 19-story 601 Montgomery St. office building rises behind and south of the buildings on the site. The neighboring 27-story Holiday Inn obstructs views of the site from nearby locations to the west. The blank concrete wall of the Holiday Inn and the 601 Montgomery St. building serve as a visual background and dominate the site from most locations to the north and east.

Two parcels of the site are open, the parking lot and vacant parcel. The small size and the coloring of the site's brick buildings may be considered a visual amenity to the pedestrian. The blank walls of the Holiday Inn and on-site structures dominate views of the site, however, and do not promote visual interest. The site is a break in the continuous Montgomery St. building wall.

The site is in a transitional area between the tall, modern buildings of the Financial District and the small-scale, older structures of the Jackson Square



SOURCE: Environmental Science Associates, Inc.

FIGURE 14: View of Existing Site

Historic District. Adjacent to the site on the east is the 850 ft.

Transamerica Pyramid. The 601 Montgomery St. building, south of the site, is about 280 ft. tall. North of the site, structures of two to four stories predominate.

The existing structures are generally not visible beyond the buildings and street segments in the immediate vicinity. The project site is not visible from long-range view points to the south, such as Twin Peaks or Potrero Hill, due to the presence of intervening high-rise structures. The site is visually prominent from locations to the north and west. The absence of a sizeable building on the site currently permits views of the lower portions of the Transamerica Pyramid and the 601 Montgomery St. building from the west and north, respectively.

There are no long-range views of San Francisco Bay or the City available from the existing buildings on the site. Short-range views of the Jackson Square and North Beach districts are visible from the site.

SHADOW

Light and shadow patterns on streets and sidewalks in the project vicinity are cast primarily by nearby existing high-rise structures. The buildings producing major existing shadows in the area include the 601 Montgomery St. building, the Holiday Inn and the Transamerica Pyramid (see Figures 22-24, pp. 64-66).

WIND

Wind conditions in San Francisco are a determinant of pedestrian comfort on sidewalks and in other public areas. Northwesterly and westerly winds are the most frequent and strongest winds during all seasons in San Francisco. (In meteorology, a west wind blows from the west.) In general, wind frequencies and speeds are highest in the summer when winds blow from the northwest 12% to 39% of the time, exceeding 13 miles per hour (mph) 35% of the time and 25 mph 3% of the time. During the summer, winds blow from the west 15% to 40% of the time, exceeding 13 mph 29% of the time and 25 mph 7% of the time.

C. EMPLOYMENT, HOUSING AND FISCAL FACTORS

LOCAL AND REGIONAL COMMERCIAL SPACE AND EMPLOYMENT

San Francisco is the major office center in the Bay Area, with approximately 63 million gross sq. ft. of office space./1/ During the 1970's, space in downtown office buildings was added at a rate of about 1.6 million sq. ft. per year; approximately 29.5 million sq. ft. were constructed between 1960 and 1981 (see Appendix C, Table C-1, p. 200). An additional 7.5 million sq. ft. of office space will be added when the buildings under construction (as of October 1981) are finished and another 3.2 million sq. ft. of office space has been approved but has not yet begun construction (as of October 1981).

The largest employment growth in the Bay Area from 1970 to 1978 occurred in the office sector, with over 60% of the regional increase in total work force. A total of 1.2 million people in 1978 held office jobs in the Bay Area, with nearly 70% employed by firms serving the local population. Over 55% of the 280,000 office workers employed in San Francisco worked for employers such as national or regional headquarters which serve a wider geographical area./2/

In early 1981, annual rents in the newer downtown office buildings ranged from about \$24 to \$35 per sq. ft. Office space in the buildings that will go on the market in 1984 is expected to command annual rents of between \$35 and \$50 per sq. ft. In May 1980, the vacancy rate in downtown office buildings, was estimated to be one-tenth of 1% according to a real estate survey./3/ Low vacancy rates coupled with rapidly growing rents suggest that the supply of new office space in San Francisco has not kept pace with demand.

With the apparent shortage of office space in San Francisco as one factor some potential users of San Francisco office space have located elsewhere. While the City houses 60% of the region's office space, 56% of the new construction, based on building permit value, took place outside the City from 1972-1979./4/ Cheaper space in outlying areas attracts companies that do not need a downtown San Francisco location or can shift their support functions out of the City. For example, approximately nine million sq. ft. of new

office space is under construction or planned in the next ten years in major projects in San Mateo County. Office space construction in Contra Costa County is averaging one million sq. ft. a year. Annual rents for new office space in both of these areas average from about \$15 to \$18 per sq. ft. It has been estimated that in San Francisco the annual tax cost to the employer in a 400-person office is \$305.29 per employee while in Concord the cost per employee is \$47.24. /5/

EMPLOYMENT AND TENANT MIX AT THE PROJECT SITE

Businesses at the project site employ 13 persons. Tenants include two restaurants employing 10 persons, an architect's office, photographer's studio, and a parking lot attended by one employee.

HOUSING

A description of regional and San Francisco housing characteristics is included in the Five Fremont Center, Final EIR (EE.80.268, Certification Date March 12, 1981), pp. 37-44. This report is available for public review at the Office of Environmental Review, 45 Hyde St., Room 319, and is hereby incorporated by reference into this EIR pursuant to California Environmental Quality Act (CEQA) guidelines, California Administrative Code, Title 14, Section 15140. Information on the housing stock includes amount, growth factors, vacancy rates and purchase and rental costs. Both regional and San Francisco housing stock are characterized by low growth, low vacancy rates and high purchase and rental costs in relation to typical wages paid. These factors combined have tended to constrict the supply and affordability of housing in San Francisco.

FISCAL FACTORS

Lot 25, which is vacant, is owned by the City and County of San Francisco and is exempt from taxation. The assessed value of the three privately owned properties in fiscal year 1980-81 is \$1,124,000. At the 1980-81 property tax rate of \$4.92 per \$100 assessed valuation, the property yielded about \$55,300 in property tax revenues, distributed as shown in Table 2.

General fund revenues to the City and County of San Francisco from the non-BART sales tax, payroll tax, gross receipts tax, and non-bond property tax, will total about \$46,570 from the site in 1981. These revenues are paid into the City's general fund.

The City incurs costs in serving the existing buildings. Police, fire, and general government expenditures are supported primarily by the General Fund. Most street maintenance, street improvement, and traffic control costs are supported by other revenue sources such as fees, fines, and federal and state aid.

TABLE 2: DISTRIBUTION OF PROPERTY TAX REVENUES FROM PROJECT SITE IN 1980-81

<u>Agency</u>	<u>Ad Valorem Tax Rate</u>	<u>Percent</u>	<u>Revenues*</u>
City and County of S.F.	\$4.162	84.6	\$47,780
S.F. Unified School District	0.343	7.0	3,860
S.F. Community College District	0.057	1.1	640
Bay Area Air Quality Management District	0.008	0.2	100
BART	<u>0.348</u>	<u>7.1</u>	<u>3,920</u>
TOTAL	4.920	100.0	\$55,300

* Based on assessed valuation of \$1,124,000 and the 1980-81 composite tax rate of \$4.92 per \$100 of assessed valuation.

SOURCE: San Francisco Controller's Office

NOTES - Employment, Housing, and Fiscal Factors

/1/ San Francisco Department of City Planning, May 1, 1981, Statistical Update on Citywide Office Development.

/2/ Association of Bay Area Governments (ABAG) and Bay Area Council, December 1979, San Francisco Bay Area Economic Profile.

/3/ San Francisco Examiner, "Effects of S.F. Office Space Squeeze", January 18, 1981, report on a real estate conference sponsored by Coldwell Banker.

/4/ Association of Bay Area Governments (ABAG), April 1981, Bay Area Office Growth, Working Papers on the Region's Economy, Number One.

/5/ San Francisco Examiner, "B of A Quake Hazard Alibi Causes a Political Quake", June 15, 1981.

D. TRANSPORTATION, CIRCULATION AND PARKING

STREET AND FREEWAY SYSTEM

The site is served by local streets and by portions of the regional freeway system (see Figure 1, p.12, and Figure 16, p.43). Access to the freeways connecting with the East Bay, San Francisco Airport and the Peninsula is provided by pairs of ramps about 1,500 ft. to the east (Washington and Clay Sts. at Davis St.), and about 1,500 ft. to the northeast (Broadway at Sansome and Battery Sts.).

The site is within the short-term Parking Belt on the fringe of the Downtown Core automobile control area, as designated in the Downtown Transportation Plan of the Transportation Element of the San Francisco Comprehensive Plan./1/ The Parking Belt area is described in the Plan as, "areas appropriate for short-term parking facilities to replace spaces removed from the core area; located and designed to intercept vehicles entering downtown from major thoroughfares before they reach the Downtown Core automobile control area."

In the vicinity of the project site, Columbus Ave., and Montgomery, Kearny, Sansome, and Clay Sts. are designated transit arterial streets in the Downtown Transportation Plan. Washington St., Clay St., Columbus Ave. and Montgomery St. are designated major thoroughfares on the Thoroughfares Plan./1/ Columbus Ave., Kearny St. and Montgomery St. are designated transit streets in the Mass Transit Plan.

The intersections of Washington and Kearny Sts., Washington St. and Columbus Ave. and Montgomery St., Clay and Kearny Sts. and Clay and Montgomery Sts. are controlled by traffic signals. The signals operate on a pretimed basis with peak and off-peak green-time allocations.

PARKING

A survey analysis of existing long-term (greater than six hours), commercially available off-street parking in the Downtown area north of Market St. was conducted (see Figure 15).^{2/} This area corresponds to a maximum walking distance of 2,000 ft. from the project site. In this area, there are a total of 13,340 long-term, commercially available off-street spaces, of which 560 were vacant on a daily basis at the time the survey was conducted. This is equivalent to an average occupancy of approximately 96%. Approximately 87% of the vacant spaces were more than 500 ft. from the project site.

TRANSIT SERVICE

Two Muni motor coach lines, the 15 and 41, run along Montgomery St. adjacent to the site and stop on corners at the intersection of Washington and Montgomery Sts. with Columbus Ave. (see Figure 16, p.43). Muni Metro light rail vehicle lines are accessible via the Embarcadero Station (about 2,200 ft. southeast of the project site) and the Montgomery Station (about 2,400 ft. south of the project site) of the Market St. Subway. Regional service is provided to the East Bay by the Bay Area Rapid Transit District (BART) from the Embarcadero and Montgomery Stations, and by A-C Transit motor coaches from the Transbay Transit Terminal located on Mission St., about 3,500 ft. southeast of the project site.

Service to the Peninsula is provided by the Southern Pacific Transportation Company (SP) from a train terminal at Fourth and Townsend Sts.; by the San Mateo County Transit District (SamTrans), which has bus routes and stops along various streets in the area, primarily on Mission St. west of First St., and by BART, which effects transfers to SamTrans routes at the Daly City Station.



**FIGURE 15: Parking Locations
in Survey Area**
SOURCE: TJKM, Transportation Consultants

LEGEND
 Study Area Boundary
 Off-Street Commercial Parking

Legend



Project Location



Direction of Buses and/or Traffic

**FIGURE 16: MUNI Routes
in the Vicinity of
the Project Site**

III. Environmental Setting

The Golden Gate Bridge Highway and Transportation District (Golden Gate Transit) provides peak-period bus service to Marin and Sonoma counties from stops on Pine and Sansome Sts. Golden Gate Transit provides ferry service to terminals in Larkspur and Sausalito from the Ferry Building southeast of the site.

Although not traditionally considered transit, car pooling is becoming a substantial form of para-transit. Golden Gate Transit operates a van pooling program to North Bay areas; there are currently about 70 van pools commuting to San Francisco from Marin and Sonoma Counties, most of which commute to the Financial District./3/ The RIDES car pooling program, operated by a nonprofit, publicly funded corporation, provides consulting and matching services to help establish Bay Area car and van pools.

NOTES - Transportation, Circulation and Parking

/1/ San Francisco City Planning Commission, Resolution 6834, April 27, 1972, Comprehensive Plan, Transportation Element.

/2/ The parking inventory survey was conducted by TJKM on Tues.-Fri. and Mon. January 20-23, 26, 1981 and Mon.-Wed. July 20-22, 1981.

/3/ Robert Crowel, Golden Gate Transit, oral communication, October 29, 1981.

E. AIR QUALITY

The Bay Area Air Quality Management District (BAAQMD) operates an air quality monitoring station approximately 1.25 miles southwest of the site. A three-year summary of the data collected at this station and the corresponding ambient air quality standards are shown in Appendix E, p.211. These data show that the San Francisco area experiences rare violations of State standards for ozone, carbon monoxide (CO), total suspended particulate (TSP), and nitrogen dioxide (NO₂).

A description of San Francisco air quality characteristics is included in the Five Fremont Center, Final EIR (EE. 80.268), p. 58-9 and Appendix D, p.258. The report is available for public review at the Office of Environmental Review, 45 Hyde St., Room 319, and is incorporated by reference into this EIR.

F. NOISE

As is typical of Downtown San Francisco, the noise environment of the site is dominated by vehicular traffic noise. The Environmental Protection Element of the Comprehensive Plan indicates an existing day-night average noise level (Ldn) of 65 dBA on Washington St. and 70 dBA on Montgomery St./1,2/

NOTES - Noise

/1/ Decibel (dB) is a logarithmic unit of sound energy intensity. Sound waves, traveling outward from a source, exert a force known as a sound pressure level (commonly called "sound level"), measured in decibels. dBA is decibel corrected for the variation in frequency response of the typical human ear at commonly-encountered noise levels.

/2/ Ldn is an averaged sound level measurement, based on human reaction to cumulative noise exposure over a 24-hour period, which takes into account the greater annoyance of nighttime noises. Noise between 10 P.M. and 7A.M. is weighted 10 dBA higher than daytime noise.

G. ENERGY

Existing energy consumption on the project site is associated with the 5,200 sq. ft. of restaurant space and 3,300 sq. ft. of office space. Existing structures were built before present State energy standards and are probably less energy efficient, on a per-sq.-ft. basis, than modern structures built to current standards.

IV. ENVIRONMENTAL IMPACT

An Initial Study of the proposed project was published September 25, 1981, and a determination was made that an Environmental Impact Report was required. Issues which were considered to require no further discussion as a result of the Initial Study include: land use compatibility, operational noise, public services and utilities, biology, cultural and historic factors, geology and soils, and safety and health hazards. Therefore, this EIR does not discuss the above issues. The Initial Study is incorporated herein as Appendix A, p. 148, and may be referred to for a discussion of these issues.

A. LAND USE AND ZONING

The project would respond to general objectives of the San Francisco Comprehensive Plan, and to the objective stated in Article 2, Section 210.3 of the City Planning Code, that the C-3-0, Downtown Office District play a leading national role in finance, corporate headquarters and service industries, and serve as an employment center for the region. The project would comply with Objective 6 of the Commerce and Industry Element of the Comprehensive Plan by maintaining and improving San Francisco's position as "a prime location for financial, administrative, corporate and professional activity," and would be consistent with Policy 2 of that objective in contributing to the maintenance of a compact downtown core.

The 300-ft.-project tower would be the maximum height permitted in the 300-H Height and Bulk District. The building length would be about 130 ft., 40 ft. less than the permitted maximum of 170 ft. The diagonal dimension of 180 ft. would be about 20 ft. less than the maximum of 200 ft.

The parking area would provide 62 parking spaces (about 25,000 sq. ft.) and two freight loading spaces (3,300 sq. ft.) within the building's enclosed one-level-plus-mezzanine parking facility. About 17,000 sq. ft. of this space, seven percent of the gross office floor area (about 42 spaces), would

be accessory parking, as described in Section 204.5 of the City Planning Code, for the office portion of the building. Fifteen spaces, or about 6,000 sq. ft., would be allocated to the residential units as 150% of the residential parking requirement in the C-3 District. The project sponsor would apply for a Conditional Use authorization to permit the remaining 2,000 sq. ft. of additional parking space (about five spaces) for the residential units pursuant to Section 157 of the City Planning Code.

Gross floor area of the office lobby, retail, restaurant and office space would be approximately 243,600 sq. ft., a Floor Area Ratio (FAR) of about 14:1. The project would have about 40 residential condominium units, with a total of about 90 bedrooms; that is, these would tend to be family or shared units rather than studios. The square footage of the proposed residential units would cause the building to exceed the 14:1 Basic FAR for a structure in the C-3-0 district. The project would include 88,100 gross sq. ft. of housing. The total gross floor area for the building would be approximately 331,700 sq. ft. (excluding cellular foundation, mechanical, and parking floor area), representing an FAR of about 19.1:1.

The use of bonuses, described in Section 126 of the City Planning Code, would permit space in addition to the Basic FAR. Permitted bonus space could be used for, and would be limited to, housing under the Interim Controls on downtown high-rise office development (Municipal Ordinance No. 240-80, effective July 1, 1980). The project sponsor intends to request approximately 83,700 sq. ft. of bonus floor area (see Table 1, p. 26). Identified bonus space would result in a total gross floor area of about 327,300 sq. ft., an FAR of about 18.8:1. The project proposes a total of about 88,100 sq. ft. of residential floor area, about 4,400 sq. ft. more than the identified bonuses would allow.

Because the project would exceed the allowable FAR of 14:1 plus identified bonus space, it would not conform to the City Planning Code. Therefore, the City Planning Commission could not approve the project as proposed. An amendment to the City Planning Code would be required to allow approval of the project.

There are several ways in which the Planning Code could be modified to permit the area of on-site housing proposed. The project could be approved by modification of Section 304 of the Planning Code concerning Planned Unit Development provisions. First, a subsection could be added to Section 304 to allow buildings in C-3 Districts that provide on-site housing to qualify for PUD status and for the housing floor area (but not the commercial space) to exceed the FAR limitations of Section 124 of the Code. Alternatively, Section 304(b) could be modified to reduce the minimum site size necessary in the definition of a PUD project. If the minimum site size were reduced from 1/2 to 1/3 of an acre, the project could be defined as a potential PUD, and the proposed additional floor area could be approved by the Conditional Use procedures outlined in Section 303 of the Code. To preclude increased density for office uses, Section 304 (b) could be modified to allow the approval of additional floor area for residential uses only, on sites smaller than 1/2 acre. A third way the Planning Code could be modified to allow approval of the project would be to amend Section 126(b) which describes development bonuses in C-3 Districts. A separate floor area bonus could be provided as subsection 126(b)(11) for buildings in the C-3 Districts which include on-site housing. Were Section 126 to be amended, corresponding changes in the Interim Controls for the Downtown also would be required to allow the new floor area bonus.

An amendment to the City Planning Code which could allow the amount of on-site housing proposed for the project would have an impact on subsequent development in the C-3 District. Such a modification to the Code would encourage the provision of additional on-site housing in future high-rise development. Larger buildings than are presently permitted would be possible on sites of less than 1/2 acre; such small sites do not presently qualify as Planned Unit Developments under Section 304 of the Code. It is likely that such an amendment to the Planning Code would result in buildings which exceed the maximum FAR and height recommendations contained in the Department of City Planning document Guiding Downtown Development. It is not possible to determine the exact location, size, or number of buildings which might be proposed as a result of such a change in the Planning Code. Modification of the Planning Code to allow approval of the project would generally encourage more housing units in the C-3 District. An increase in housing would result

in greater development of residential retail facilities and domestic conveniences, as well as greater 24-hour activity, in the Downtown.

Through the provision of pedestrian amenities and about 4,900 sq. ft. of recreational and common area in the residential portion, the proposed project would comply with Policy 4 of Objective 6 of the Commerce and Industry Element of the Comprehensive Plan by providing adequate "amenities for those who live, work and use Downtown." The project would include about 17,500 gross sq. ft. of common and private open space for project residents and would comply with the open space requirement for residential use in the C-3 District (Section 135 (d) of the City Planning Code).

Through the provision of 40 residential dwelling units, the proposed project would comply with Objective 2 of Policy 2 of the Residence Element of the Comprehensive Plan which recommends "multiple-residential development in conjunction with commercial uses in the Downtown commercial area."

By providing on-site housing, the proposed project would introduce housing into the northern edge of the Financial District. The Chinatown community, one block west of the site, and the Golden Gateway Terrace apartment complex, three blocks to the east, would provide neighborhood retail facilities and domestic conveniences near the site. Eventually, residential services may be established within the immediate vicinity as the amount of residential land use in the downtown district increases.

In 1967 the City Planning Commission instituted a policy of reviewing, under its discretionary powers, all applications for new buildings in the "Portsmouth Corridor," an area bounded by Kearny, Washington, Davis and Clay St., "with particular attention to the effects of any such buildings upon views to be created or blocked."/1/ Because of view blockage by the Holiday Inn, west of the project, and the Transamerica Pyramid and Alcoa Building to the east, the proposed project would not obstruct any long range views from the "Portsmouth Corridor."

The project site includes a 4,820 sq. ft. parcel (Lot 25) which is in City ownership. When this parcel was declared surplus by the Department of Public Works, it was reviewed by other City agencies and identified as potential open space in a report prepared by the Recreation and Park Commission (RPC).^{2/} Lot 25 was designated a potential open space site in the Recreation and Open Space Element of the Comprehensive Plan (Amendment No. 7-8-75, January 4, 1978) and examined for development as a downtown mini park. The RPC subsequently determined that this parcel was not appropriate for such use because of its size and the shading caused on the parcel by nearby buildings. On April 9, 1981 the RPC recommended to the City Planning Commission that the designation of the parcel as a potential open space site be removed and the parcel be offered for sale to the public (RPC Resolution No. 12456). The RPC further recommended that a portion of the proceeds from the sale of the property be deposited in the City's Open Space account to be used to develop, redevelop or otherwise improve open space resources within the Chinatown community. Policy 3 of the Neighborhood Objective Section of the Recreation and Open Space Element of the Comprehensive Plan, which recognizes the Chinatown community as a "high need" recreational area, states as policy to "give priority for recreational improvements to high need neighborhoods."

The City Planning Commission and the RPC had a joint meeting on July 7, 1981 to review the status of Lot 25. At that time, the RPC voted to remove the potential open space designation. The City Planning Commission voted, by motion, on July 16, 1981 to remove the potential open space designation of the parcel, thereby deleting the property from the Recreation and Open Space Element of the Comprehensive Plan. On September 14, 1981 the Board of Supervisors voted to authorize the sale of Lot 25 and directed that proceeds from the sale be reserved until further review and action by the Board. The Board indicated the intention "to use at least that portion of the proceeds which represents the difference between the actual acquisition cost of the property and the sale price for street maintenance, alley-way improvements and purchase of land for open space purposes in Chinatown."^{3/} The project sponsor intends to bid on and purchase Lot 25 at public auction in November 1981.

Guiding Downtown Development. In May 1981, the Department of City Planning published Guiding Downtown Development (GDD), a report containing a series of regulatory proposals for managing development in downtown San Francisco. (See Section VII, for an Alternative conforming with the recommendations contained in GDD.) GDD recommends that the Basic FAR for the project site be changed from 14:1 to 12:1, with an additional FAR of 5:1 allowable for residential uses. The allowable height would be reduced from 300 ft. to 250 ft. The gross commercial floor area of the project would exceed the GDD recommended FAR of 12:1 by 2:1. The 5:1:1 FAR proposed for housing would exceed the GDD allowable maximum FAR for on-site housing of 5:1 by 0.1. At a total FAR of 19.1:1, the project would exceed the GDD maximum FAR of 17:1 by 2.1:1. GDD recommends that the average floor area of floors above the midpoint of the building height be about two-fifteenths less than the average floor area of floors below the midpoint. The sculptured upper-level setbacks of the project would conform to this provision. At 300 ft., the project would exceed the 250 ft. GDD height by 50 ft. No increase in height for residential uses would be permitted by GDD in 250-ft. height districts.

The project would include ground-floor retail space, encouraged by GDD. Public works of art, valued at 1% of construction costs, are recommended in GDD, and art work would be provided at the ground level of the project; its cost has not yet been determined. GDD policies suggest that one sq. ft. of public open space be provided for every 25 sq. ft. of gross building floor area. If this guideline were applied to the entire structure, including residential space, the recommended amount of open space would be about 13,200 sq. ft., or about 75% of the site area. If applied to the commercial portion of the building only, the recommended amount of open space would be about 9,700 sq. ft. The project as proposed would have an open pedestrian way on the ground floor as public space. It would also contain about 17,500 gross sq. ft. of common and private open space for use by project residents.

GDD recommends that 640 sq. ft. of housing be constructed for each 1,000 sq. ft. of office space. This would total about 168,500 sq. ft. of housing (about 200 units) for the project. If the maximum amount of office space were provided, for an FAR of 12:1, GDD would not permit the construction of more than 87,000 sq. ft. of housing (a maximum additional FAR of 5:1) on this

site. This would be approximately 1,000 sq. ft. less than the amount of residential use proposed as part of the project. The remainder of the GDD housing requirement would have to be provided off-site or by reducing the commercial floor area of the building.

NOTES - Land Use

/1/ Resolution No. 6112, adopted by the San Francisco City Planning Commission June 29, 1967.

/2/ 1978-1979 General Manager's Report on the Open Space Requisition and Park Renovation Fund, January 4, 1978, Recreation and Park Commission.

/3/ Ordinance No. 469-81, passed by the San Francisco Board of Supervisors September 14, 1981.

B. URBAN DESIGN

VISUAL EFFECTS

The project would result in the destruction of two small-scale, brick structures and the construction of a 24-story building, approximately 300 ft. in height. The proposed building would be infill development between the Holiday Inn and Transamerica Pyramid, contributing to the apparent bulk formed by existing structures along the northern Financial District C-3-0 boundary. The project design is intended by the architect to complement visually adjacent buildings and to provide a transition between nearby highrises and the smaller structures of the Jackson Square Historic District. The project is intended by the architect to increase the visual definition of the site and to present a unifying element in the architecture of the site vicinity.

Views of the project from adjacent streets would include all or part of the project tower. From nearby locations on Washington St., Columbus Ave., and Merchant St., views of the project would include the full height of the tower. The height of the proposed structure would increase the so-called "urban-canyon effect" of adjacent Financial District Buildings, particularly on Merchant St. (see Figure 17, p.55). Pedestrian views of the site from the Montgomery St. corridor, north of the site, would include the full height of

the tower. South of the site on Montgomery St. portions of the project tower would be blocked by the adjacent 601 Montgomery St. building. The project would represent the northern end of the high-rise building "wall" on the west side of Montgomery St.

The project would interrupt some views of the Bay from the upper stories of the 601 Montgomery St. building. Similar views from the proposed structure would be created. The project would interrupt few views to the west from portions of the Transamerica Pyramid, because affected views are already blocked by the Holiday Inn. The Holiday Inn is a north/south-facing structure and occupants would not have a view of the project building. (See photos taken from the Holiday Inn, on file at the Office of Environmental Review.) The project would not block any long-range views from structures north of the site as these are blocked by existing development. From Portsmouth Square, west of the site, the project would partially block short-range views of some buildings, but it would not obstruct any views of the Bay, as buildings east of the site presently block views of the Bay from the Portsmouth Square Area.

The project would be visible in the downtown skyline from some long-range viewpoints. The proposed structure would be visible from Telegraph Hill, obstructing existing views of the 601 Montgomery St. building and buildings to the south such as the Aetna and Pacific Telephone buildings (see Figure 18, p.56). From Chinatown, the project would be visible between the Holiday Inn and the 601 Montgomery St. buildings, obstructing views of the lower portions of the Transamerica Pyramid (see Figure 19, p. 57). The upper level project setbacks on the corner of Washington and Montgomery Sts. are intended by the architect to preserve views from upper Columbus Ave (see Figure 20, p. 58). When viewed from long-range viewpoints to the northeast, north and west, including Russian Hill, the project would not serve as a major visual focus in the downtown panorama, due to the prominence of taller structures such as the Transamerica Pyramid and Bank of America Building. The project would not be visible from the southern approaches to the City on the James Lick and Bayshore freeways or from Potrero Hill, due to intervening structures.

The residential portion of the project would generally be oriented with views towards the north and east, with the exception of 16 units which would have a south or west orientation. To the north, views would be unobstructed towards Telegraph Hill, Coit Tower, and the Bay. To the south and east, views would be directed to nearby buildings in the Financial District. The tapering form of the Transamerica Pyramid, and its approximately 100-ft. distance from the site, would reduce the apparent mass of this structure as seen by east-facing occupants of the project. Nighttime views of the lighted Transamerica Pyramid would also be seen from the east-facing units. The residential portion of the project would be above the adjacent 19-story 601 Montgomery St. building, allowing short-range unobstructed views to the south. In some cases, direct views to the west would be blocked by the Holiday Inn; the base of the Holiday Inn is located approximately 10 ft. from the base of the project. Views to the north or south would be available from all residential units with views blocked to the west by the Holiday Inn.

DESIGN

The project is intended by the architect to relate architecturally to existing buildings in the site vicinity. The project design includes a series of upper level setbacks, "stepping down" in the northeast and southeast-facing facades of the building (see Figure 21, p.59). The upper portion of the tower would be shaped so that the vertical elements of the project would be in different planes than those of the adjacent Holiday Inn, providing a visual separation of the two buildings. The stepped tower design is intended to provide a height and bulk transition from the 52-story Bank of America Building at California and Kearny Sts., and the 48-story Transamerica Pyramid, directly east of the site, to the smaller-scale two- to eight-story structures that characterize the Jackson Square Historic District to the north and northeast.

To define the building base and provide pedestrian interest, the building exterior at the the first two stories would be different from the upper levels. The upper levels of the facade would be composed primarily of metal panels and tinted glass. The building setbacks would be distinguished by a combination of opaque and tinted glass.



← Project →

SOURCE: Environmental Science
Associates, Inc.

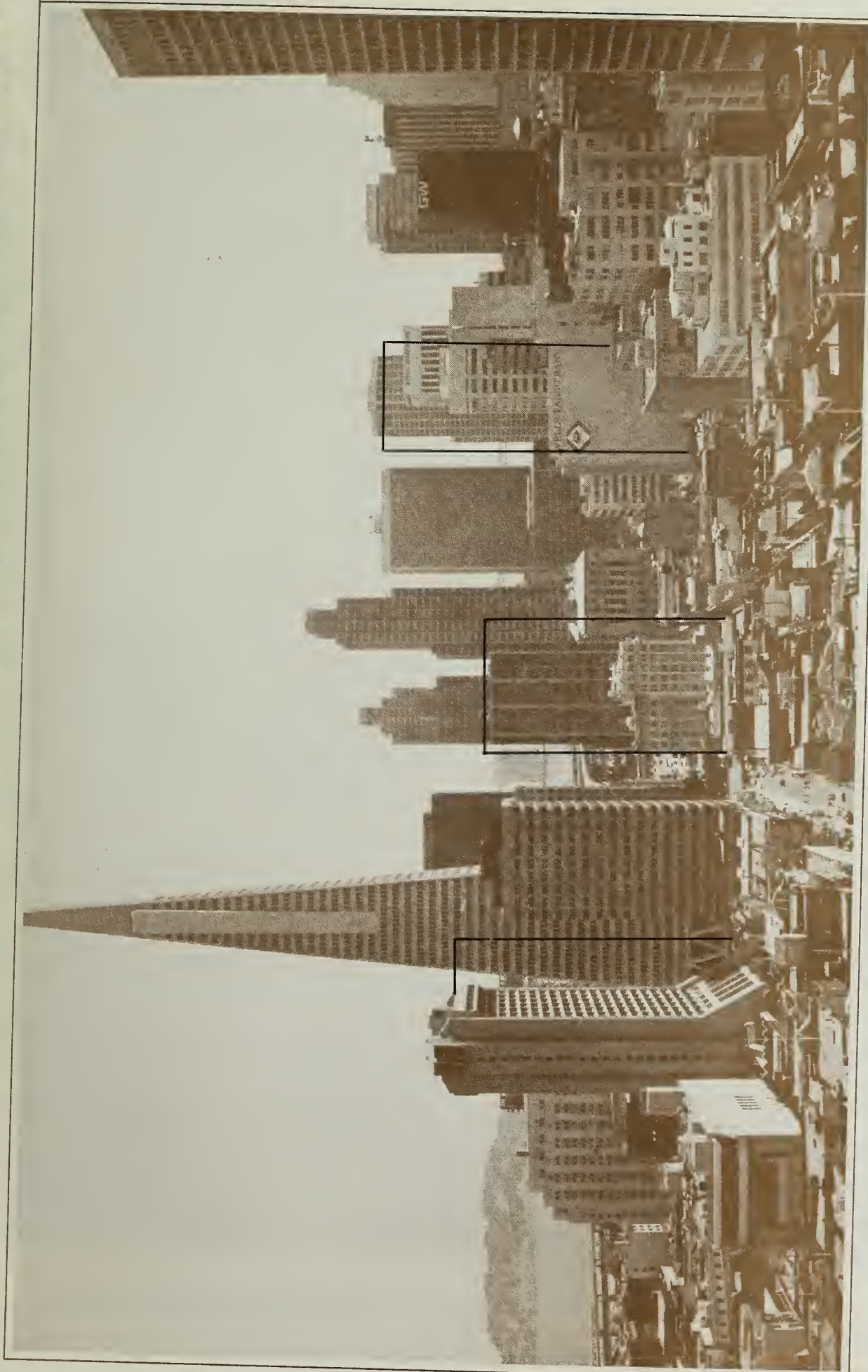
FIGURE 17: View of Merchant Street



← Project →

SOURCE: Environmental Science
Associates, Inc.

FIGURE 18: View from Telegraph Hill
(Montgomery and Green Streets)



Proposed Structures:

← **Project**

← *Bank of Canton
Building*

← *456 Montgomery
Street*

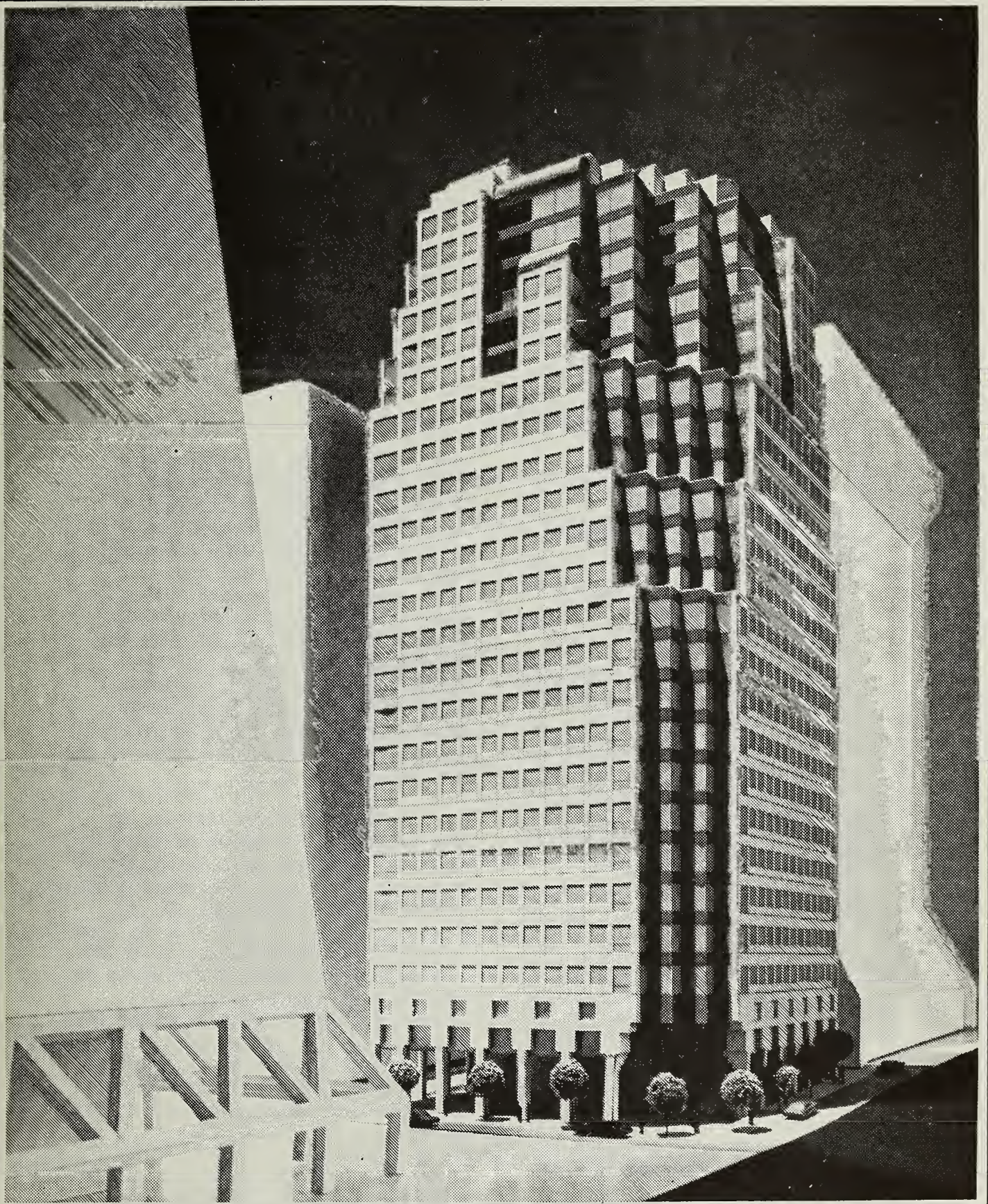
SOURCE: Environmental Science Associates, Inc.

**FIGURE 19: View from Chinatown
(Powell and Clay Streets)**



SOURCE: Environmental Science
Associates, Inc.

FIGURE 20: View from Columbus Avenue



SOURCE: Kaplan/McLaughlin/Diaz

FIGURE 21: View of the Project Model
(from the northeast)

The Urban Design Element of the San Francisco Comprehensive Plan provides a basis in City policy for summarizing the urban design implications of the proposed project (see Table 3).

TABLE 3: RELATIONSHIP BETWEEN APPLICABLE URBAN DESIGN POLICIES OF THE SAN FRANCISCO COMPREHENSIVE PLAN* AND THE PROPOSED PROJECT

URBAN DESIGN POLICIES	RELATIONSHIP OF PROJECT TO POLICIES
A. <u>Policies for City Pattern</u>	
1. Policy 1. "Recognize and protect major views in the city, with particular attention to those of open space and water." (p.10)	The project site is outside the City's major designated view corridors along Pine St. and California St. The project would be in the "Portsmouth view corridor", but would not obstruct any long-range views because buildings east of the site presently block distant views of the Bay from the Portsmouth Square Area and the Portsmouth corridor has generally been filled by development. No short-range views would be blocked by the project, and new views of the Bay would be created.
2. Policy 3. "Recognize that buildings, when seen together, produce a total effect that characterizes the city and its districts." (p.10)	The project would be visible, but not prominent, in views of the skyline. Together with the adjacent highrise buildings, the project would define the northern edge of the Financial District and provide some transition between taller buildings nearby and the smaller buildings of the Jackson Square Historic District. The project together with the Holiday Inn could result in a wall effect emphasized by identical building heights, although project setbacks are intended to avoid this effect.

*City and County of San Francisco, 1971, Comprehensive Plan, Urban Design Element. (page references shown in parentheses).

SOURCE: Environmental Science Associates.

TABLE 3: RELATIONSHIP BETWEEN APPLICABLE URBAN DESIGN POLICIES OF THE
SAN FRANCISCO COMPREHENSIVE PLAN* AND THE PROPOSED PROJECT
(Continued)

- | | |
|--|---|
| <p>3. Policy 5. "Emphasize the special nature of each district through distinctive landscaping and other features." (p.12)</p> | <p>The project would include street trees on Montgomery and Washington Sts. The entry plazas, residential lobby, and pool area would be landscaped. There is presently no distinct landscaping in the immediate vicinity of the site.</p> |
| <p>4. Policy 8. "Increase the visibility of major destination areas and other points for orientation." (p.13)</p> | <p>The project would be cut back at the Montgomery and Washington St. corner to preserve views of the Transamerica Pyramid from upper Columbus Ave. and to respond to the Pyramid's sloped configuration.</p> |

B. Policies for Conservation

- | | |
|--|---|
| <p>5. Policy 6. "Respect the character of older development nearby in the design of new buildings." (p.25)</p> | <p>The project would represent a departure in style and scale from the neighboring Jackson Square area and a departure in style from older Financial District buildings. The upper-level setbacks would provide some transition between the taller Financial District buildings and the low-rise Jackson Square District.</p> |
|--|---|

C. Policies for Major New Development

- | | |
|---|---|
| <p>6. Policy 1. "Promote harmony in the visual relationships and and transitions between new and older buildings." (p.36)</p> | <p>See Items 2, 3, and 5 above. According to the Urban Design Plan, buildings should be sympathetic to the scale, form and proportion of adjacent development. The setback design on the upper northeast- and southeast-facing facades of the project would provide a height and bulk transition from nearby highrise buildings and the smaller structures which characterize the Jackson Square Historic District.</p> |
|---|---|

TABLE 3: RELATIONSHIP BETWEEN APPLICABLE URBAN DESIGN POLICIES OF THE
SAN FRANCISCO COMPREHENSIVE PLAN* AND THE PROPOSED PROJECT
(Continued)

7. Policy 2. "Avoid extreme contrasts in color, shape and other characteristics which will cause new buildings to stand out in excess of their public importance." (p. 36)	The faceted upper-floor setbacks are designed to reduce the apparent bulk and scale of the project. The building would contain no reflective glass or high intensity lighting and, hence, would not impose reflective or glaring light on other properties or nearby roadways.
8. Policy 5. "Relate the height of buildings to important attributes of the city pattern and to the height and character of existing development." (p.36)	See Items 2, 3, 5 and 7 above. The project would be comparable in height to the adjacent Holiday Inn and 601 Montgomery St. buildings, shorter than the Transamerica Pyramid, to the east, and taller than nearby low-rise buildings to the north.
9. Policy 6. "Relate the bulk of buildings to the prevailing scale of development to avoid an overwhelming or dominating appearance in new construction." (p.36)	See Items 2, 3, 5, and 7 above. The maximum horizontal dimensions of the project would be comparable to nearby structures in the Financial District. The project would be greater in bulk than older low-rise buildings outside the C-3-0 district in the Jackson Square Historic District to the north. The faceted upper-floor setbacks are intended to reduce the bulk and scale of the project.
10. Policy 13. "Improve pedestrian areas by providing human scale and interest." (p.57)	The project would include widened sidewalks on Washington and Montgomery Sts. The project would have ground-level retail uses and a sculptured street-level facade surfaced with green-black polished granite, and include a pedestrian arcade to facilitate shortened walking distances and provide street-level interest. The ground-floor and parking-level exterior would be different from the upper stories to define the building base and promote pedestrian interest.

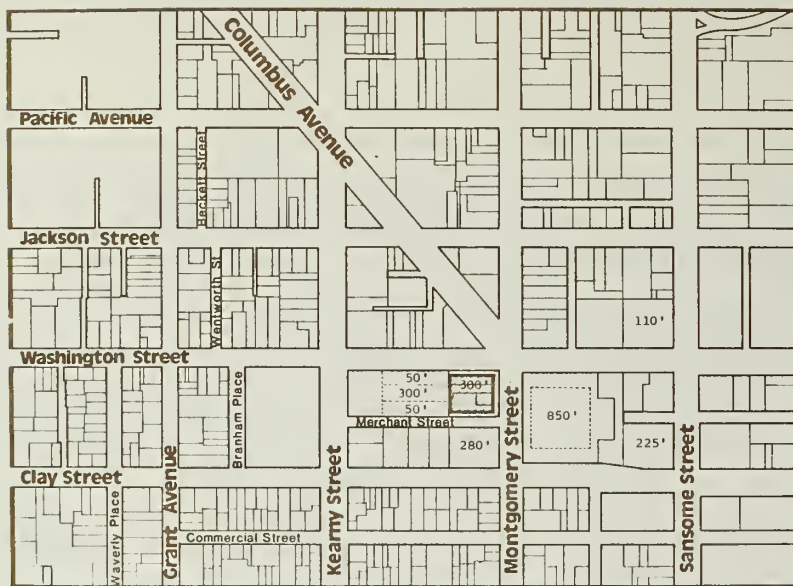
SHADOW

The project, in replacing existing low-rise structures on the site, would create more extensive shadow patterns than exist at present. Much of the project shadow patterns would coincide with those cast by existing structures in the area (601 Montgomery, Holiday Inn, and the Transamerica building). The project would not shade any existing public parks.

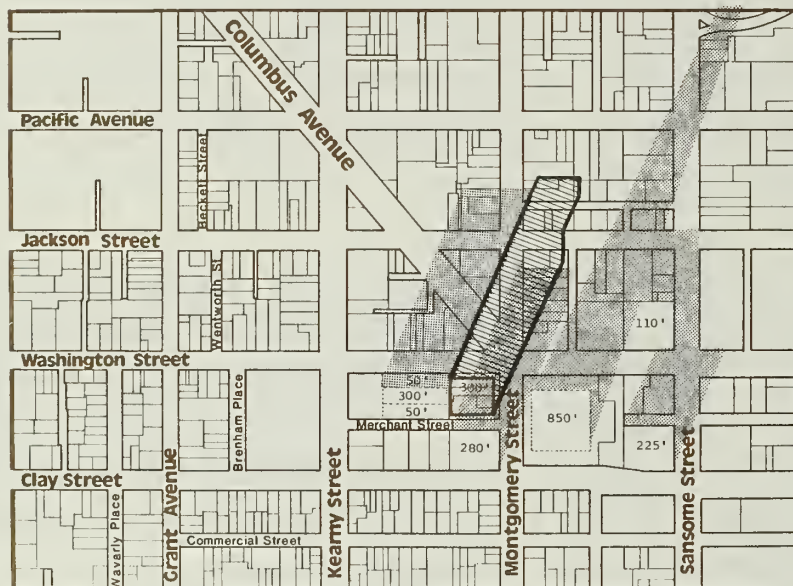
Washington and Montgomery Sts. are shaded by existing structures throughout the day at all seasons of the year. Portions of Columbus Ave. are shaded from mid-morning to early afternoon hours in the fall, winter and spring months. Portions of the lower floors of the Transamerica Pyramid are shaded in the late afternoon year-round. Sansome St., one block east of the site, is shaded in the late afternoon year-round, and in the early afternoon in the fall through spring months.

At all seasons of the year, early-morning shadows due to the project would generally coincide with shadows from existing structures. New shadows from the project would begin to occur during mid-morning and would continue through most of the day; primary shadow effects would be on the portions of Washington and Montgomery Sts. adjacent to the site. Portions of the widened sidewalk and seating area on the north side of the Transamerica Pyramid would be shaded by the project in the late afternoon at all seasons of the year.

During the mid-morning hours in the winter months the project would complete the shading of Columbus Ave. from Washington St. to Pacific Ave., eliminating the existing corridor of sunlight between shadows cast by the 601 Montgomery St. building and Transamerica Pyramid. Towards midday the project would eliminate the existing corridor of sunlight between the shadows of the Holiday Inn and 601 Montgomery St. building, shading Washington St. adjacent to the site, and Montgomery St., north to Jackson St. (see Figure 22). Shadows from the project would eliminate this existing corridor of sunlight throughout the day, completing the shading of portions of Montgomery and Sansome Sts. in the late afternoon hours. The project would contribute to shading portions of the widened sidewalk area on the north side of the Transamerica Pyramid in the late afternoon (see Figure 22).





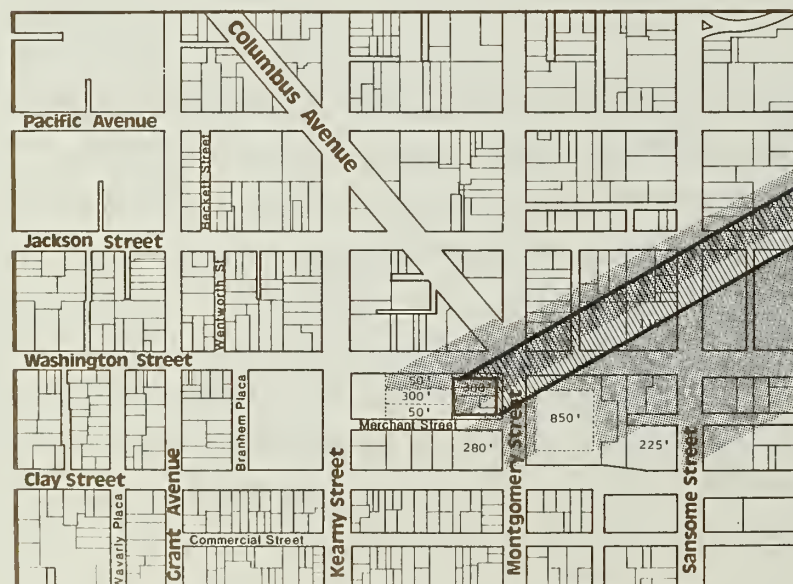
8 A.M.



1 P.M.

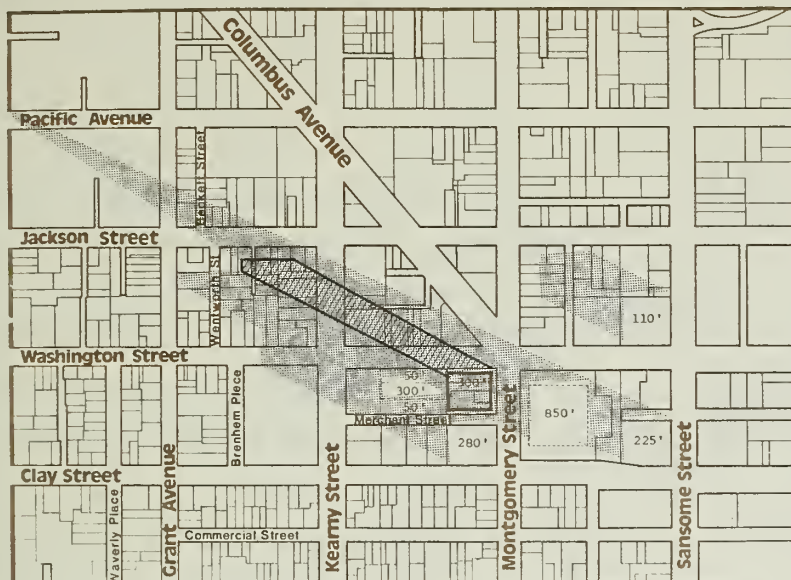
LEGEND

-  Proposed Building Shadow
-  Existing Shadow

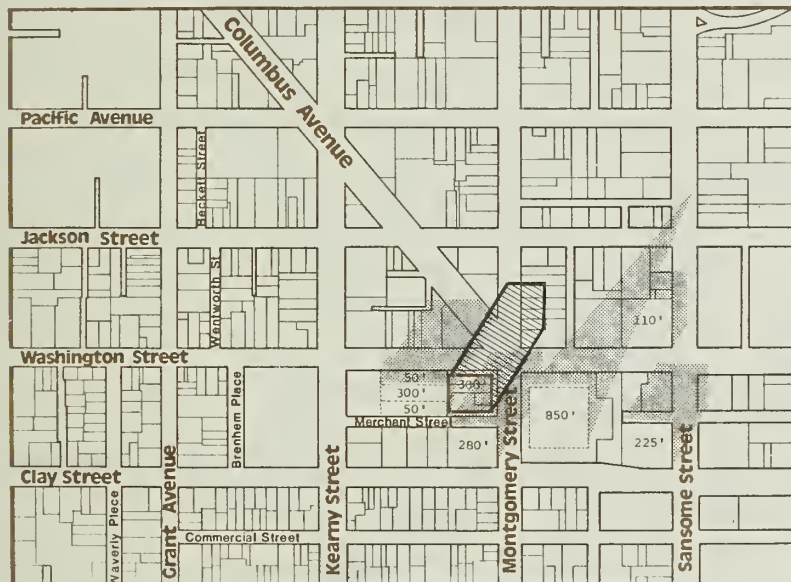


4 P.M.

FIGURE 22
Projected
Shadow Patterns
in Vicinity
of Project
Mid-December





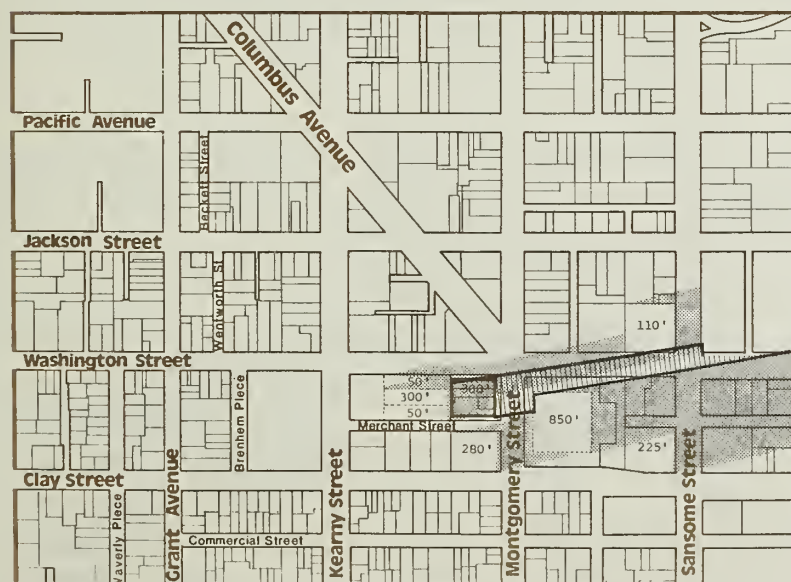
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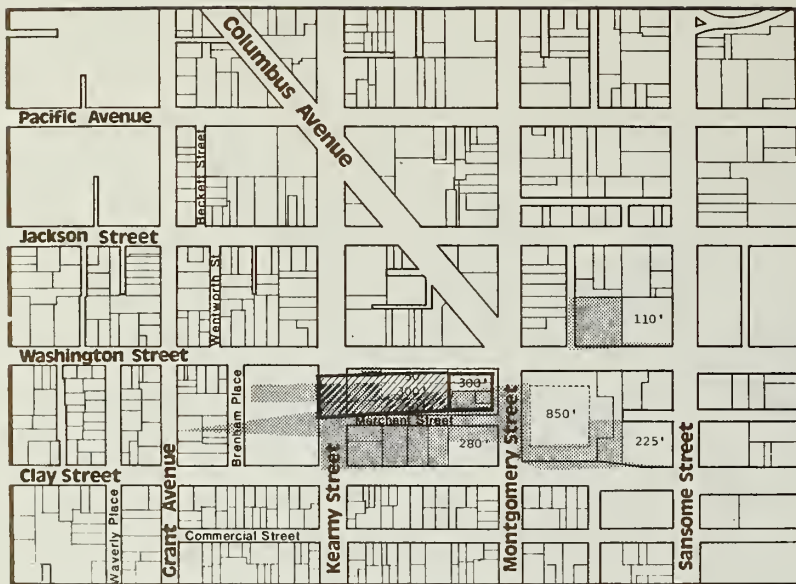
LEGEND

-  Proposed Building Shadow
-  Existing Shadows

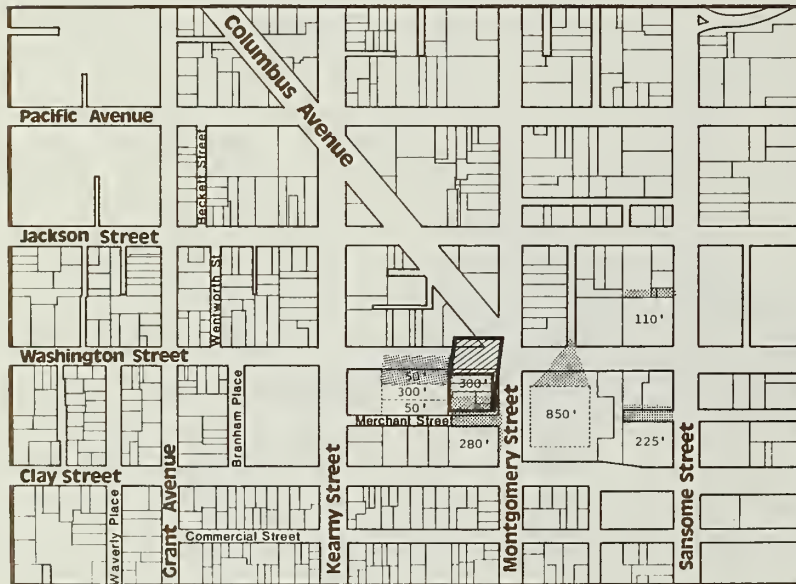


4 P.M.

FIGURE 23
Projected
Shadow Patterns
in Vicinity of
Project
Mid-March and
Mid-September



8 A.M.



1 P.M.

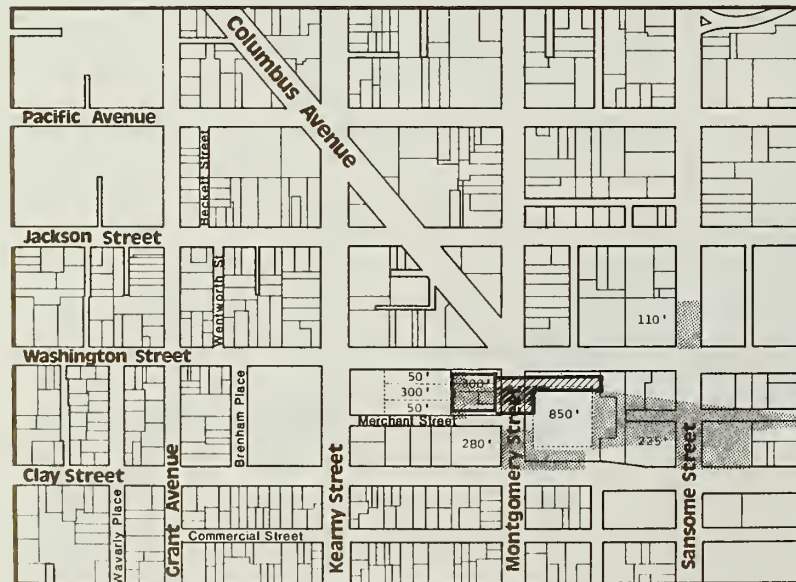
LEGEND



Proposed Building
Shadow



Existing Shadow



4 P.M.

FIGURE 24
Projected
Shadow Patterns
in Vicinity of
Project
Mid-June

During the mid-morning and mid-afternoon in spring and autumn, the project would add to the shadowing of Washington St. and Columbus Ave., north of the site. In the late afternoon hours the project would eliminate the existing corridor of sunlight between the shadows of the 601 Montgomery St. building and the Holiday Inn, shading Washington St. east to Sansome St., and contributing to shadows on the lower floors of the Transamerica Building. The project would contribute to shading portions of the widened sidewalk and seating area on the north side of the Transamerica Pyramid in the late afternoon (see Figure 23, p.65).

Morning and early afternoon shadows cast by the project during the summer months would shade Washington St. In the late afternoon, project shadows would be confined to Montgomery St. directly east of the site and portions of the Transamerica Building. The project would shade the widened sidewalk and seating area on the north side of the Transamerica Pyramid in the late afternoon during the summer (see Figure 24, p.66).

WIND /1/

Northwesterly and westerly winds are the most frequent and strongest winds during all seasons in San Francisco. In the summer, winds blow from the northwest 12% to 39% of the time, exceeding 13 miles per hour (mph) 35% of the time and 25 mph 3% of the time. Winds blow from the west 15% to 40% of the time, during the summer, exceeding 13 mph 29% of the time and 25 mph 7% of the time.

Wind speeds at pedestrian level can be predicted by comparing the ratio of pedestrian-level wind speed to the freestream wind speeds above the wakes of surrounding buildings. This ratio is called the wind speed ratio and is expressed as percentages of the freestream wind speed, which is essentially that as measured at the top of the Federal Building at 50 Fulton St., about 1.2 miles southwest of the site. For San Francisco, the commonly-used definitions of pedestrian-level wind speed ranges are as follows: /2/

<u>Velocity Ratio</u>	<u>Ratio of Pedestrian Level Windspeed to Calibration Windspeed</u>
Low	- 0.19
Moderately Low	0.20 - 0.29
Moderate	0.30 - 0.49
Moderately High	0.50 - 0.69
High	0.70 - 1.00
Very High	Greater than 1.00

On July 22, 1981, windspeeds and turbulent intensities at various points on and near the project site were measured. Subsequently, wind tunnel tests of localized wind speeds and directions at and near the project site were conducted using a scale model of the site and vicinity. The study included separate tests of northwest and west winds under existing conditions; with the proposed project; and with an alternative building design.

For northwest winds, existing wind speed ratios are generally low to moderate, varying from 0.19 to 0.48. Most locations near the site have speed ratios of less than 0.30. The intersection of Columbus Ave. with Washington and Montgomery Sts. is gusty (gustiness indicates variable wind speeds, changing over short periods of time). There are moderately low to moderate winds along Washington and Kearny Sts. (wind speed ratios of 0.20 to 0.35). Winds are in the moderate range along Columbus Ave. upwind of the site (ratio of 0.25) and Merchant St. adjacent to the site (0.30 to 0.35). Vertical vortices form off both the north and south downstream edges of the Transamerica Pyramid under existing conditions.

For west winds, existing wind speed ratios in the vicinity are generally low to moderate, varying from 0.13 to 0.46. The intersection of Columbus Ave. and Washington St. is gusty, but less so than with northwest winds. Wind speeds on Washington St. are moderate (wind speed ratios of 0.35 to 0.46), being highest north of the Transamerica Pyramid. Vertical vortices, stronger than those under northwest winds, occur off both the north and south downstream edges of the Transamerica Pyramid, creating turbulence at the Transamerica Redwood park, east of the Pyramid. The local wind direction is variable along

Montgomery St. between the project site and the Transamerica Pyramid, but wind speeds are generally low over most of the block. Wind speeds at other locations near the site are low to moderately low.

The project would change the existing wind environment of the site vicinity. Under prevailing northwest wind conditions, the project would have several effects. The intersection of Clay and Montgomery Sts. to the south would be less windy (a wind speed ratio of 0.50 would be reduced to 0.40) and less gusty than existing conditions. The vortex mid-block on Kearny St. between Washington and Jackson Sts. would be eliminated due to "shelter" from the project. A moderately high wind speed ratio (a ratio of more than 0.55, or about 2.5 times the existing wind speed ratio) would prevail on Montgomery St. east of the project site./3/ There would be steady, moderate winds around the northeast corner of the proposed building, under the covered walkways and at the project entrances. Street-side glass walls, vegetation, or other screening at the covered walkway area would provide pedestrian protection from these winds. Wind speed ratios would more than double (from a moderately low ratio of 0.20 to a moderate ratio of nearly 0.5) at the southeast corner of the Columbus Ave. intersection with Montgomery and Washington Sts. Wind speed ratios at the southwest corner of the Holiday Inn and along Merchant St. would increase slightly, but would still remain moderate. Wind speed ratios on Washington St. north of the site would increase about 30%, but would remain moderately low.

Under westerly winds, the project would result in a recirculating wind flow pattern on Washington St. north of the project site, with about 15% higher wind speed ratios than now exist. On Washington St., midway between Kearny and Montgomery Sts., a vortex with rapid changes in wind direction over short distances would occur. The project would increase turbulence on Washington St. north of the Transamerica Pyramid, but the average wind speed would decrease by about 30% from the existing conditions, thus minimizing the turbulent effect on Washington St. The project would increase street-level turbulence and gustiness directly east of the proposed building. The turbulence and gustiness east of the project would be variable, conceivably changing over short distances under the covered pedestrian walkways and at the

building entrances. The remainder of the wind flow pattern due to west winds would be essentially the same as at present.

Discomfort to pedestrians begins to appear at wind speeds of about 12 miles per hour (mph).^{/4/} Pedestrian discomfort would not occur frequently in the project vicinity because, based on observed wind speed ratios, freestream wind speeds of about 25 to 63 mph for northwest winds and 26 to 93 mph for westerly winds would be required for street-level winds to reach 12 mph. Wind speeds greater than 25 mph occur 3% and 7% of the time for northwesterly and westerly winds, respectively.

The Holiday Inn would produce a strong downstream recirculation zone, creating high levels of turbulence at the proposed swimming pool, under both northwest and west winds. A windscreen has been tested and would adequately mitigate the effects of the recirculation zone.

NOTES - Urban Design

/1/ This section is based upon a study entitled, "Wind-Tunnel Studies of the Montgomery-Washington Building", July 1981, prepared by Dr. Bruce White, University of California at Davis, as a subconsultant to Environmental Science Associates, Inc. A copy of this document is included in Section X of this report as Appendix B., p.182.

/2/ Note that windspeed ratios are not actual wind speeds but ratios. Thus a point having "very high" wind speed could still experience light winds on a near-calm day. Likewise, a point found to have "low" wind speed could experience significant winds on an extremely windy day.

/3/ This effects is due, in part, to a shift in the existing wind flow pattern. At present, northwest winds concentrate along Columbus Ave. and split nearly evenly along Montgomery and Washington Sts. due to the Transamerica Pyramid. The proposed building design would results in less wind resistance along Montgomery St. than along Washington St. As a consequence, more of the wind from Columbus Ave. (a wide street) would funnel into Montgomery St. (a narrower street) and accelerate as it encounters the more confined street.

/4/ "Caution's in the Wind for San Francisco High-rise Architects", Los Angeles Times, p.3 May 18, 1981

C. EMPLOYMENT, HOUSING AND FISCAL FACTORS

PROJECT-RELATED EMPLOYMENT

About 960 permanent full time jobs would be provided within the project. In the absence of specific information about tenants, this number was derived by applying an average sq. ft. per employee number by use to the estimated floor area that would be devoted to each use (see Table 4). The net increase in employment at the site, after subtracting the number of jobs at the site in mid-1981, would be approximately 950.

TABLE 4: PROJECTED PERMANENT EMPLOYMENT AT THE PROJECT SITE

<u>Employment Type</u>	<u>Building Space (Gross Sq. Ft.)</u>	<u>Space Per Employee (Sq. Ft.)</u>	<u>Projected Number of Employees</u>
Office	236,600	250	946
Retail/Restaurant	4,000	500	8
Building Maintenance	331,700	30,000	11
TOTAL EMPLOYMENT			<u>965</u>

SOURCE: Environmental Science Associates, Inc. and Crow-Spieker Companies

BAY AREA EMPLOYMENT MULTIPLIER EFFECTS

Secondary employment and income impacts would result from permanent project employment because each employed person would generate additional employment by his or her demands for goods and services, through the multiplier effect. Assuming that the new jobs created by the project were primarily in finance, insurance, and real estate (the so-called FIRE sector), about 1,140 additional jobs in other sectors of the Bay Area economy would result from the growth of FIRE businesses./1/

The total number of Bay Area jobs that would be supported by growth in downtown employment due to the project would be about 2,090 (the 950 net project jobs plus the 1,140 jobs induced by the multiplier).

The project would require about 300 person-years of construction labor, an average of about 150 full-time jobs throughout the nearly two-year construction period. About 480 additional person-years of employment would be generated in the Bay Area as a result of the multiplier effect of project construction.

OFFICE

The proposed project, together with other major downtown office buildings under construction and approved (as of October 1981) would add approximately 11.1 million gross sq. ft. of office space if all were to be built (see Appendix C, Table C-1, p. 200). At 1970-79 absorption rates, this is equivalent to about an eight-year supply. Low vacancy rates together with rising rents suggest that supply has been less than demand.

If office employment in San Francisco continues to account for the same percentage of overall employment growth as it has in the past decade, projections by the Association of Bay Area Governments (ABAG) suggest that a net increase of about 1.25 million sq. ft. of office space will be required each year between 1980 and 1985 to accommodate that growth./2/ Demand for office space, however, could be even greater. The ABAG projection indicates that 1.25 million additional sq. ft. of office space will be occupied each year. This could be because no more than that would be demanded or because no more would be supplied. If occupancy is limited by supply, then more than 1.25 million sq. ft. of new space would be occupied each year if more than that amount were built. Vacancy rates and the rate of rent increase suggest a backlog of demand. One commercial real estate broker foresees that by 1984, 9.1 million sq. ft. of office space will be available, and all but about 2 million of this amount is presently leased./3/

The growth of office space would continue the trend of regional growth in service-sector and office headquarters activity and employment. The larger, newer buildings would be occupied primarily by larger tenants and those with

the ability to pay higher rents. Because rent levels are lower for older buildings, the space which becomes vacated by tenants relocating to newer buildings could become available for tenants who cannot afford the higher rents for new office space. /4/

New increases in downtown office space and employment would increase the demand for retail goods, food and business services in the area. To the extent that the new space would not be occupied by firms providing these services, demand would increase for existing space and possibly for further development.

Multiplier effects would support additional employment in San Francisco and throughout the Bay Area in a number of different industrial and occupational groups. In addition, the construction industry would continue to be active while contributing to the area's economy through its own multiplier effects.

HOUSING

As indicated in the previous subsection, (p.71), the project would result in an increase in downtown office employment of approximately 950 jobs by 1985. To the extent that the project would attract out-of-area employees and contribute to the formation of additional households by existing area residents, it would also contribute to increase local housing demand and a jobs/housing imbalance.

Probable housing impacts of additional downtown employment are discussed in the Five Fremont Center, Final EIR, (EE 80.268, Certification Date March 12, 1981), pp. 85-91. This document is available for public review at the Department of City Planning, Office of Environmental Review, 45 Hyde St., Room 319, and is hereby incorporated by reference into this EIR. Due to both the relatively high wages and housing prices in San Francisco, many people are attracted to the employment opportunities, but are unable to afford housing. By 1985, it is projected that cumulative San Francisco housing demand resulting from Downtown office development will be about 17,000 units. This demand would exceed the projected growth in City housing stock by an estimated

9,000 to 12,000 housing units. This total demand is expected to cause some downtown employees to seek housing in other Bay Area locations.

Residency patterns for new employees that would be generated by the project are based on housing assumptions developed by the San Francisco Department of City Planning in a memorandum entitled "Housing Requirement for Office Development in San Francisco," July 1981, and by approximate residency patterns of downtown office employees surveyed for five other recent Downtown EIRs (see Appendix C, Table C-2, p. 201). It is assumed that about 40% are expected to reside in San Francisco, 18% on the Peninsula, 30% in the East Bay, and 12% in the North Bay. According to the Department of City Planning housing formula, which is under development, the proposed project would generate demand for about 210 units of housing in San Francisco. (It is assumed for the formula that office use generates one employee for each 250 sq. ft., that 40% of all employees will desire to live in San Francisco, that 1.8 working adults occupy each unit, and that each employee will require an average of 400 sq. ft. of residential space.) The 40 condominiums (containing 90 bedrooms) proposed would provide for approximately one/fifth of the housing demand generated by the project. The number of new households estimated to be generated outside of San Francisco as a direct result of the project are about 110 on the Peninsula, 180 in the East Bay, and 65 in the North Bay (see Appendix C., Table C-2, p.201).

The amount of housing demand in San Francisco created by the proposed project would be about 2.5% to 4.0% of the City's projected housing growth from 1980 to 1985 (see Appendix C, Economic and Fiscal Factors, Table C-2, p.201). It is not possible to quantify the effects on San Francisco housing prices resulting from housing demand created by the proposed project, as housing demand and cost are also affected by regional growth in housing stock, employment, population and national economic trends.

The proposed location of condominium apartments at the northern border of the Financial District could generate local demand for resident-serving retail and personal services. To the extent that the project would not be occupied by firms providing these services, demand would increase on existing retail

facilities in the area and possibly increase demand for further new retail development.

The San Francisco Subdivision Code requires provision of 10% low and moderate income housing in projects of more than 50 dwelling units, provided subsidies are available. The project would provide about 40 condominiums and would not include any low and moderate housing. The sales prices of the 40 proposed condominium units would range from \$300,000 to \$350,000 each (1981 dollars). Information from the San Francisco Board of Realtors shows that the average selling price of a home in the City in 1981 is \$151,203./5/ The sales price of homes sold in the week of October 1, 1981 ranged from \$95,000 to \$236,750.

Published information on office workers in the Bay area indicates the annual salary for support personnel ranges from \$7,800 to \$26,000 and that for clerical personnel ranges from \$7,800 to \$30,000./6/ Salary information on professional occupations is not available and there is no published information on income levels for employees specifically in San Francisco. To estimate probable income levels of project office workers, the 601 Montgomery St. building was surveyed to determine tenant distribution and corresponding salary ranges. This building is located adjacent to the project site, is similar to the project's square-footage, and is managed by the project sponsor. Approximately 60% of 601 Montgomery St. tenants were surveyed. The results indicate that about 34% of the office workers are professionals with salaries from \$55,000 to \$300,000; 36% are support personnel with salaries from \$18,000 to \$35,000, and 30% are clerical workers with salaries from \$12,000 to \$29,000./7/

Financial institutions are currently allowing 35% of a buyer's gross monthly income for mortgage payments. It is not known to what extent the tenant and employee composition of the proposed project would resemble that of 601 Montgomery St., but were the project to contain a similar distribution of office workers and salary ranges, then 34% of the project office workers could afford monthly mortgage payments of \$1,600 to \$8,750, 36% could afford from \$525 to \$1,020, and 30% could afford from \$350 to \$845. Most San Francisco households have 1.8 working adults per unit, but the exact number of workers per household by job classification has not been determined (higher housing

prices are probably causing more workers to live together in one household in order to afford housing). Assuming 1.4 workers per household for professional and 2.0 workers per household for support and clerical, 34% of the project worker households could afford housing priced from \$185,000 to \$1 million, 36% could afford housing from \$87,000 to \$169,000, and 30% could afford housing from \$58,000 to \$140,000./8/

REVENUES TO CITY

The project would have a fair market value of about \$50 million (in 1981 dollars)./9/ Based on an estimated \$12.5 million assessed value, the property would generate about \$500,000 in revenue to the City's General Fund from the \$4 (per hundred dollars of assessed value) non-bond property tax.

The building would also generate property tax revenues which would be used to retire bond debts. The tax rate at which these revenues would be generated in 1985 would depend on the amount of principal and interest payments due in that year and the total assessed value of property in San Francisco. The rate in 1981 is \$0.92 per hundred dollars of assessed value. If that were still the rate in 1985, when the building would be occupied, revenues from the building would be \$115,000.

The payroll tax is paid on the earnings of about nine existing employees at the project site. At a rate of 1.1% of total earnings, payroll tax revenues presently total about \$1,280./10/ Payroll taxes would be paid to the City General Fund on the earnings of approximately 900 of the 950 net new employees in the project. The remainder would be exempt from the tax either because they would work for banks or insurance companies (which are not required to pay San Francisco payroll taxes), because they would work for small, retail tenants with tax liabilities less than \$500, or because they would be owners of businesses (who are also exempt). Based on an average wage of \$24,600 for office workers in 1981, the payroll tax revenues would be about \$243,000. /11/

Sales tax revenues are generated by both employee expenditures and restaurant sales. The average office worker in downtown San Francisco is estimated to make taxable expenditures of \$1,070 annually in the central business district./12/ Sales tax revenues allocated to the City and County of San Francisco are 1% of taxable sales. Sales tax revenues generated by existing uses on the project site are about \$430 per year./13/ Estimated sales tax revenues allocated to the City by the project would be about \$10,100.

Sales tax revenues generated on the site by the 1/2% BART sales tax are presently about \$215 a year. Of that amount, BART receives \$161 directly, and the remaining \$54 is distributed by the Metropolitan Transportation Commission. Estimated sales tax revenues from the 1/2% BART sales tax generated by project would be about \$5,050. Of this total, BART would receive \$3,790 directly, and the remaining \$1,260 would be distributed by the Metropolitan Transportation Commission. Sales tax revenue would also be generated by the retail uses of the site. This amount can not be determined until the types of business are identified.

The project sponsors pay a gross receipts tax on their rental income from the existing buildings on the site. Total annual rental income is about \$85,800./9/ At a tax rate of 0.22%, annual gross receipts tax revenues from the existing buildings are about \$190. The two existing restaurants also pay a gross receipts tax on their annual sales volumes.. Based on an annual income of \$28,000, the tax from the restaurants is about \$60 per year. Based on estimated total annual receipts from rents of about \$7 million in 1981 dollars, tax revenues from the project (assuming full occupancy) would be about \$15,400.

General Fund revenues for the City and County of San Francisco from the project would total about \$768,500, based on the tax rates and fees in effect in mid-1981. General Fund revenues from the existing uses on the site totalled about \$46,600 in 1981.

Estimates of receipts from the payroll tax and gross receipts tax would increase by about 36% if the Mayor's Revenue Package, approved by the voters in November 1980, is fully implemented. The payroll tax would increase from

1.1% to 1.5% of total earnings and the gross receipts tax would be increased to \$5.00 per \$1,000 of revenues. The Mayor's Revenue Package was approved by less than the required two-thirds majority of the voters. A two-thirds majority is required under Proposition 13 for a "special tax". The validity of this measure is now being challenged in the courts.

MUNI

The City's General Fund provides a subsidy to the Municipal Railway's operating budget which covers the difference between Muni's costs and the revenue Muni receives from fares and from federal and state governments. This subsidy represents the cost of Muni to the City. The Muni average general fund deficit per ride to the City in 1981-82 is estimated at \$0.39 per ride./14/ Assuming that about 29% of the employees who occupy the existing buildings on-site ride Muni to and from work, the existing General Fund subsidy to Muni required by commuting on-site employees is about \$690 per year./15,16/ Assuming the 1981-82 subsidy would remain the same in 1985 and that 29% of the project employees would ride Muni to work, the project would create the need for a general fund subsidy to Muni of about \$50,300 at 1981 costs.

The project would help pay for the Muni deficit through its revenue contributions to the General Fund. In the 1980-81 budget, 10% of discretionary General Fund revenues were allocated to Muni. If this percentage were to remain constant, the project would generate around \$77,000 in General Fund Revenues to Muni in 1985. San Francisco Board of Supervisors approved on April 27, 1981, a proposal to assess new downtown commercial development to support Muni. The plan calls for levying a one-time fee of up to \$5.00 per gross sq. ft. on new downtown office space and creating a downtown district in which all commercial office owners would be assessed a yearly fee./17/ The fee plan has been legally challenged; but if it were to go into effect as proposed, the project could generate about \$1,170,000 for the one-time Muni fee. The rate of the yearly fee which would be assessed has not been determined.

BART

BART fares cover about 40% of BART costs. For each BART passenger trip an average of \$1.00 is paid by fares, and an additional \$1.50 in costs must be supported by some other revenue source. Over 86% of this additional cost is supported by the special BART 1/2% sales tax. It is estimated that about 15% of the employees who occupy the existing buildings ride BART to work./15/ The estimated annual costs to BART that are not covered by these riders' fares are \$1,370./18/ BART's revenues from the sales tax generated by existing employees and BART's share of property tax revenue from the site total about \$3,950. BART's net surplus as a result of the activities at the site is estimated to be about \$2,300. Assuming the 1981 deficit per rider would be the same in 1985 and that 15% of project employees would ride BART to work, the project would generate a deficit of about \$100,000.

CUMULATIVE FISCAL ASPECTS

Since 1979, five studies have been prepared which have analyzed fiscal effects of development in the City's of C-3-0 Downtown Office District. The studies were prepared by: Recht, Hausrath and Associates, Sedway/Cooke, Gruen Gruen + Associates (GG+A), Arthur Anderson and Co., and David Jones, and are compared and discussed in the 101 Montgomery Street Final EIR, EE 80.26, pp. 189-199.

This document is available for public review at the Department of City Planning, Office of Environmental Review, 45 Hyde St., and is hereby incorporated by reference into this EIR. These studies differ in various ways: in the questions they ask, the data sources they use, the methodologies they employ, and the conclusions they draw. Table 5 compares the purpose, study methodology, and conclusions of the five studies.

The project would probably have an initial fiscal benefit. Because revenues to the City would probably increase at a slower rate than costs, due to Proposition 13 limitations on property tax increases, there would be a time when cumulative costs of providing services to currently proposed and approved development would be higher than revenues provided (assuming no new revenue sources are found and the rate of new development declines).

TABLE 5: SUMMARY OF RECENT STUDIES ON FISCAL IMPACT OF DOWNTOWN DEVELOPMENT

STUDY, AUTHOR, DATE	PURPOSE OF STUDY	DATA SOURCES	STUDY METHODOLOGY	CONCLUSIONS
"Fiscal Concerns" in Downtown San Francisco Conservation and Development Planning Program, Phase I Study, Sedway/Cooke, et al., October 1979, pp. 56-59	To qualitatively assess the likely fiscal impact of new development in the C-3 area under Proposition O.	SPUR STUDY (1975)	SPUR cost/revenue estimates for downtown in 1973 and for projected growth 1974-1990 were assumed. Proposition 13's effect on revenues and the possible need for increased transportation infrastructure were considered. Generalized conclusions about fiscal impact of new development were drawn.	1) After Proposition 13, "costs may exceed revenues in the downtown by as much as 25%." 2) "[N]ew downtown development will not solve the city's growing fiscal problem; without new revenue sources, development will make it worse in the long run."
Downtown Highrise District Cost Revenue Study, Arthur Andersen & Co., November 1980	To quantify for 1976-77 and 1978-79 how much revenue the C-3-0 area generated and how much it costs to provide city services to the area.	Data compiled from city records and through conversations with city officials.	Only revenues generated within the C-3-0 and costs of providing services to the C-3-0 counted. "The principle guiding the study methodology was to calculate the amount of revenue that San Francisco would lose and the costs that could be reduced if the Downtown Highrise District were a separate city."	The C-3-0 generated \$56.79 million in 1976-77, or 61% more than the cost of city services to the area. In 1978-79, revenues were \$53.29 million, or 48% greater than costs.
"Fiscal Considerations" Appendix C, 101 Montgomery Street FEIR, Recht Hausrath & Associates, January 1981.	To draw generalized conclusions about "how new development downtown in a post-Proposition 13 environment is likely to change the City's fiscal health from what it would be without new development."	SPUR Study, city records and conversations with city officials.	Under alternative assumptions about the cost/revenue balance in existing buildings and in new buildings, the fiscal impact over time of new development was compared to that of no new development.	"[A]n on-going process of new development would improve the City's fiscal situation. This beneficial impact would cease if new development were halted. This conclusion is tentative due to uncertainties about increased Muni costs."
Downtown Highrise District Cost/Revenue Study, David Jones, February 1981.	To quantify for 1978-79 the revenues generated by businesses in the C-3-0 and the service costs imposed on the city and BART by the C-3-0.	Arthur Andersen study.	The Jones study differs from the Andersen study primarily as follows: 1) Costs of BART (but not revenues to BART) are included; 2) Only revenues paid by businesses and building owners are considered; 3) Muni deficit is computed differently; 4) Most costs are estimated as a percentage of revenues rather than on the basis of actual service demand in the C-3-0.	The C-3-0 imposed costs of \$94.4 million on San Francisco and BART, or 125% more than the revenues the area's businesses and building owners generated to San Francisco.
Fiscal Impacts of New Downtown High-Rises on the City and County of San Francisco, Gruen Gruen + Associates, March 1981	To quantitatively estimate city revenues from the C-3-0 and costs of serving the C-3-0 in 1998, assuming the addition of 30 million square feet of building space in the C-3-0 between 1981 and 1998.	Arthur Andersen study; data compiled from city records and through conversations with city officials.	"Only direct effects are considered." Costs are only measured for services "provided within the physical limits of the C-3-0 district" and revenues are limited to "taxes on buildings within the district and the activities that take place within those buildings." Assumes the Arthur Andersen study is accurate and builds upon it.	In 1980, revenues from the 39 million square feet of building space in C-3-0 were 1.66 times as large as costs. In 1998, after completion of the 30 million square feet of new space, revenues from the entire 69 million square feet of C-3-0 building space would increase to 1.92 times as large as costs.

SOURCE: Recht, Hausrath and Associates

Proposition 13 limits the amount of increased assessed valuation on property, in the years in which the property is not sold, to 2% annually. When a property is resold, it can be reassessed based on its market value. As private homes change ownership more often than commercial or office property, the property tax revenues from the residential portion of the project would increase at a faster rate than the property taxes from the other project uses.

An amendment to the City Planning Code to allow the amount of on-site housing proposed by the project would have an impact on subsequent development in the C-3 District. Such a modification of the Code would encourage the provision of additional on-site housing in future high-rise developments. Modification of the Planning Code to allow approval of the project would generally encourage more housing units in the C-3 District. An increase in housing would result in greater development of residential retail facilities and domestic conveniences, as well as greater 24-hour activity, in the Downtown.

NOTES - Employment, Housing and Fiscal Factors

/1/ Projections are based on the Bay Area Input-Output Model from Cooperative Extension Service, University of California, Berkeley, San Francisco Bay Area Input-Output Model 1967-1974, July 1978. A multiplier of 1.2 was used for FIRE and 1.6 for construction.

/2/ Association of Bay Area Governments (ABAG) and California Employment Development Department (EDD) data indicate that about 60% of the growth in San Francisco employment between 1972 and 1978 was in offices. ABAG projects that employment in San Francisco will increase 41,400 between 1980 and 1985, or an average of 8,300 per year. Sixty percent of that, or 5,000 jobs, are expected to be in offices. Assuming 250 gross sq. ft. of office space per employee, office employment growth would require an additional 1.25 million sq. ft. of office space each year. (Association of Bay Area Governments and Bay Area Council, San Francisco Bay Area Economic Profile, December 1979, pp. 40-43; California Employment Development Department, Wage and Salary Employment, By Industry, San Francisco City and County, 1972-1978.)

/3/ San Francisco Examiner, "Effects of S.F. Office Space Squeeze," January 18, 1981, report on a real estate conference sponsored by Coldwell Banker.

/4/ ABAG, April 1981, Bay Area Office Growth, Working Papers on the Region's Economy, Number One.

/5/ San Francisco Board of Realtors, October 5, 1981, "Multiple Sales Service" This information includes all homes sold from February 11, 1981 to October 1, 1981.

/6/ U.S. Department of Labor Statistics, March 1981, "Area Wage Survey for the San Francisco - Oakland, CA, Metropolitan Area."

/7/ Margaret E. Braverman, Trammell Crow Company, written communication, October 30, 1981.

/8/ These calculations assume that buyers are using conventional financing with 20% downpayment at an 18% interest rate. This is a worst-case assumption, as some buyers might borrow money to put down large downpayments or find loans with lower interest rates (such as owner-financing).

/9/ Patrick Gilligan, Crow-Spieker Companies, letter communication, August 6, 1981.

/10/ Average annual earnings of the employees at the existing site were estimated to be about \$13,000 (based on information from the State of California Employment Development Department, San Francisco-Oakland Standard Metropolitan Statistical Area Annual Planning Information 1980-1981. The payroll tax is paid on the earnings of about 9 employees at the site. At a rate of 1.1% of total earnings, payroll tax revenues total about \$1,280.

/11/ Downtown office workers earn about \$24,600 annually in 1981, based on average annual earnings of \$16,300 for downtown office workers in 1974, in San Francisco Planning and Urban Renewal Association (SPUR), June 1975, Impact of Intensive High Rise Development in San Francisco, Detailed Findings. Data are inflated by about 51%, the national average percentage increase in weekly earnings of finance, insurance and real estate employees between 1974 and the end of 1980 (U.S. Bureau of Labor Statistics, Monthly Labor Review, January 1981).

/12/ Taxable expenditures within the central business district per office worker were \$715 per year in 1974 (SPUR, 1975, see note /8/ above, p. 262). Between 1974 and 1981, average weekly earnings of finance, insurance, real estate and service workers rose nationally about 50%: $1.50 \times \$715 = \1072 .

/13/ Sales tax revenues generated by employees at the existing project site are about \$140 per year. Based on average gross receipts of \$2,400 per month for both the existing restaurants, sales tax revenues allocated to the City and County of San Francisco are about \$290 per year.

/14/ Bruce Bernard, Muni Chief Accountant, oral communication, October 28, 1981. Based on 1981-82 Muni net operating cost of \$142,139,000, and net revenues of \$87,833,000/. Assuming the 1979 revenue passenger number of 139 million would be applicable in 1981, the average general fund deficit per ride would be \$0.39. However, there has not been any update of the ridership number since 1979, therefore, the deficit per ride of \$0.39 is estimated.

/15/ Office of Environmental Review (OER), "Guidelines for Environmental Evaluation - Transportation Impacts", October 1980.

/16/ Assuming 260 work days per year, two rides per day and absenteeism of 10% (holidays, vacations, sick days), each worker will ride an estimated 468 times per year. Therefore, the cost is: 13 workers x 29% ride Muni x 468 rides per year x \$0.39 deficit per ride = \$688.

/17/ San Francisco Ordinance No. 224-81, approved by the Board of Supervisors on April 20, 1981.

/18/ 13 workers x 15% ride BART x 468 rides per year x \$1.50 cost per ride = \$1,369.

D. TRANSPORTATION, CIRCULATION AND PARKING

DEMOLITION, EXCAVATION AND CONSTRUCTION

During the construction period, transportation impacts would result from truck movements to and from the site during demolition, excavation, and construction activity. Demolition and excavation would require about one month each.

Trucks are expected to follow haul routes approved by the Department of Public Works, probably via Montgomery and Clay Sts. to the Embarcadero and James Lick Freeways to Peninsula disposal sites, return trips would probably be via Washington St. Post-excavation construction activity would require truck movements to deliver construction materials. Construction would require about 18 months. The average number of daily truck trips during this period would be about 12, with a maximum of about 40, in or out of the project site between 9:00 a.m. and 4:00 p.m. /1/

Any truck traffic from 7:00 a.m. to 9:00 a.m. or from 4:00 p.m. to 6:00 p.m. would conflict with peak-hour traffic, particularly at freeway access points. Site access would be via Montgomery St. Materials storage would be provided on site. Sidewalks on the south side of Washington St. and the west side of Montgomery St. would be closed for the construction period. The parking lane on Washington St. and probably the loading zone on Montgomery St. would be closed to allow pedestrian travel under covered walkways in the streets. This would result in decreased capacity of traffic lanes during peak hours and would contribute to congestion. No bus stops would be affected by project construction.

PROJECT OPERATION

Travel Demand

Project-generated travel has been estimated based on the number of net sq. ft. of office space and the number of residential dwelling units proposed for the project./2/

The peak hour of project trip generation was assumed to occur during weekday evenings between 4:00-6:00 p.m. During the peak hour, 20% of the daily (24-hour) travel was assumed to occur. The peak-hour modal split (trip distribution) is shown in Table 6. Project travel was assumed to split 42% auto, 55% transit and 3% pedestrian (see Appendix D, Table D-9). The project would generate approximately 3,760 person trip ends during a 24-hour period, or 1,880 round trips, not including lunchtime walking trips or walking trips to the retail uses on the site.

TABLE 6: PROJECTED PEAK-HOUR WEEKDAY TRAVEL* DEMAND GENERATED BY THE PROJECT
(person trip ends)

<u>Uses</u>	<u>Trip Generation</u>	<u>Total</u>	<u>Auto</u>	<u>Transit</u>	<u>Walk**</u>
195,000 net sq. ft. of office	3.5 per 1000 sq.ft.	680	305	360	15
40 condominium units	0.75 per unit	40	5	30	5
		<u>720</u>	<u>310</u>	<u>390</u>	<u>20</u>

* Person trip ends

**Persons who walk to the site without using any other form of transportation. Persons traveling on public transit or by auto to public parking in the area would also arrive as pedestrians.

SOURCE: TJKM, Transportation Consultants

Because little vacant public parking exists in the area (spaces are estimated to be 96% filled, see p.41), the trips by auto shown in Table 6 would compete with other prior users of public parking, who would then use transit or park

further from the site. In effect, there would be little net increase in auto use in the area. By this reasoning, there would be an additional impact on public transit, over and above the daily trips generated directly by the project, due to the secondary effect of the project's automobile trip generation in displacing other prior users of public parking.

VEHICULAR IMPACTS

The highest existing traffic volumes are on the streets leading to the freeways. A capacity analysis of existing volumes on the intersections adjoining the project site indicates that the intersections of Washington and Kearny Sts., Clay and Kearny Sts., and Clay and Montgomery Sts., are operating at vehicular Level of Service C, or better; the intersection of Washington and Montgomery Sts. at Columbus Ave operates at vehicular Level of Service D. (See Appendix D, Table D-1, p. 202, for definitions and volume/capacity ratios for each vehicular Level of Service, and Table D-2, p. 203, for existing traffic volumes on streets in the project vicinity.) The two intersections at the freeway ramps (the intersections of Broadway and Sansome Sts., and Clay and Front Sts.) are operating at Level of Service C or better. Table 7 shows existing peak-hour volume to capacity ratios at intersections in the vicinity of the project site.

The p.m. peak 24-hour automobile travel generated by the project was analyzed. Traffic generation was based on the estimated number of on-site employees. For an estimate of project-generated traffic volume increases on streets immediately surrounding the project, the capacity of the on-site garage was used as the basis; it was assumed that routes of drivers going to other garages would be sufficiently dispersed that they would have a negligible effect on traffic volumes on the adjacent streets

Washington, Montgomery, Clay, and Sansome Sts., which serve the project as feeders to or from freeway ramps, are points of maximum automobile traffic in the Downtown Financial District. They are assumed to represent the "worst case" of traffic impacts. Impacts on other streets would be less, as project traffic on them would be more dispersed.

TABLE 7: ESTIMATED EXISTING PEAK-HOUR VOLUME-TO-CAPACITY (V/C) RATIO
SUMMARY AT INTERSECTIONS IN THE VICINITY OF THE PROJECT SITE

<u>Intersection</u>	<u>V/C Ratio*</u>	<u>Level of Service**</u>
Montgomery and Washington and Columbus	0.81	D
Montgomery and Clay	0.72	C
Kearny and Washington	0.61	B
Kearny and Clay	0.78	C
Broadway and Sansome	0.71	C
Clay and Front	0.51	A

*Volume/capacity, where capacity is at Level of Service E.

**See Appendix D, Table D-1, for definitions of Levels of Service.

SOURCE: TJKM, Transportation Consultants, Based on manual intersection counts made on Thursday, July 16, and Monday through Wednesday, July 20-22, 1981.

The project is proposed to have about 62 off-street parking spaces. Although the project sponsor expects to reserve about 40 of the spaces for use by residents, a "worst-case" assumption for traffic generation is that all of the spaces would operate as short-term parking. Under this assumption the spaces are projected to generate approximately 790 vehicle trip ends to or from the site each day./3/

As downtown San Francisco is currently experiencing an increase in office building floor area, the Department of City Planning has initiated an analysis of the cumulative traffic impact of 29 buildings in the vicinity of the proposed project (see Appendix D, Table D-8 p. 208) which are proposed to be occupied after 1980, or which are now under environmental review. The 1984 base traffic volumes, exclusive of the project volumes, were projected by analyzing the traffic increases from these 29 buildings as well as traffic from other developments.

The effect of traffic generated by the project garage on the level of operation of intersections adjacent to the site and on freeway feeder streets during the peak-hour, in terms of volume-to-capacity ratios, is shown in Table 8. The project impact at the four intersections closest to the project site would be a result of traffic using the parking facility proposed by the project and by service-vehicle traffic. The garage has been analyzed assuming short-term use only of the 62 spaces, with a worst-case condition of all spaces emptying onto the streets during the p.m. peak hour. To evaluate net traffic effects, the trips currently generated by the existing 45-space short-term parking facility on the site were subtracted.

The percentage traffic volume increase caused by the proposed project on the freeway feeder streets, and on streets near the proposed project, above 1984 traffic levels, is estimated to be not more than 4% on any of the freeway approach streets (see Appendix D, Table D-3, p. 204, for projected vehicular volumes). The total addition to Bay Bridge traffic caused by the project would be fewer than 50 vehicles in the peak p.m. hour. The impact of the project would be an imperceptible lessening of the Level of Service of traffic operation on the street system. There would be a proportionate increase in pedestrian-auto conflicts in the Montgomery/Washington/Columbus intersection due to the increase in the number of pedestrians. As shown in Table 8, the level of operation would not be decreased by more than 1% of the 1984 base conditions by the project traffic.

PARKING IMPACTS

Existing on-street parking on the block faces containing the project site consists of 12, 30-minute metered spaces, on Washington St. Observations during daytime hours indicate a high usage of the metered spaces with a moderate turnover of parked vehicles./4/ Approximately 44% of the vehicles remained in the spaces longer than the 30-minute metered time limit; during the p.m. peak hour, all of the spaces in the block were occupied. Use of the loading zones was also shown to be high, with approximately 25% of the vehicles remaining longer than one hour in the zones. The Montgomery St. site frontage is a commercial-vehicle loading zone. Average duration of stay in the loading zones was approximately 30 minutes per vehicle. The overall

TABLE 8: PROJECTED P.M. PEAK-HOUR INTERSECTION VOLUME-TO-CAPACITY (V/C) RATIOS NEAR THE PROJECT SITE IN 1984

<u>Intersection</u>	<u>1984 Base</u>		<u>1984 Base + Project</u>	
	<u>V/C</u>	<u>LOS*</u>	<u>V/C</u>	<u>LOS*</u>
Montgomery & Washington	0.82	D	0.83	D
Montgomery & Clay	0.73	C	0.74	C
Kearny & Washington	0.61	B	0.62	B
Kearny & Clay	0.78	C	0.79	C
Clay & Front	0.60	A	0.61	B
Sansome & Broadway	0.77	C	0.80	C

* See Appendix D, Table D-1, for definitions of Levels of Service.

SOURCE: TJKM, Transportation Consultants

conclusion which may be drawn from these numbers is that demand for short-term parking in the area presently exceeds the supply, and that illegal parking occurs.

The daily parking demand which would be generated by the office portion of the project is projected to be about 290 parking spaces, 240 long-term and 50 short-term. The parking demand has been calculated based on the projected number of auto trips./3/ The project would provide 62 on-site parking spaces, creating an on-site deficit for the project of approximately 230 spaces.

Because the project incorporates residential units, the City Planning Code (Section 151) requirement of one off-street parking space per four dwelling units in the C-3-0 District, would mean that 10 of the 62 spaces proposed would be required for the use of building residents. If all of the remaining 52 parking spaces were designated as short-term spaces, the project would satisfy the estimated short-term parking demand generated by the project. Were 42 of the spaces to be designated for short-term parking and the remainder for

project residents, the short-term parking deficit would be about eight spaces. Were fewer of the spaces designated for short-term parking and more for use by residents, the short-term parking deficit would increase.

The parking demand from each of the 29 buildings analyzed to project 1984 base conditions was calculated. Long-term demand from the 29 projects would be expected to be about 13,310 spaces per day, and average short-term demand would be about 2,075 spaces per hour. The project demand (240 spaces long-term, 50 spaces short-term) would represent about 1.8% of the increased long-term demand and about 2.4% of the increased short-term parking demand from the 29 buildings (see Appendix D, Table D-8, p. 208, for a list of buildings included in the cumulative analysis).

Current City policy, as stated in the Revisions to the Transportation Element of the Master Plan Regarding Parking (1977), is to "encourage short-term use of existing parking facilities within and adjacent to the downtown core by converting all-day commuter parking to short-term parking in areas of high demand or to car/van pool parking where short-term parking demands are low."/5/ Under this policy, there is a potential for approximately 13,000 off-street spaces within 2,000 ft. of the project site to be converted to short-term-only parking. This would displace a large number of long-term parkers currently using parking facilities in the downtown core.

The long-term parking demand from the 29 buildings and the proposed project would be added to any long-term parkers displaced by the Master Plan Parking Policy. This could cause several changes in driver behavior. Some drivers might park at greater distances, west beyond Mason St., south beyond Market St., or north beyond Green St., and either walk or use Muni to reach the downtown core. In the years following 1984, as further office expansion occurs, particularly in the Yerba Buena Center Redevelopment Area, this option would be foreclosed because of expanded parking demand, unless a large expansion of parking supply, greater than the expansion of parking demand, were to occur in the South-of-Market area. Some other streets where displaced long-term parkers might wish to park now have, or may have, residential permit parking, restricting parking to permit holders.

Imbalances in the potential long-term parking demand and supply could encourage the use of car pools and van pools, or the creation of satellite parking facilities in outlying areas, such as the South-of-Market area and the periphery of the Downtown Commercial District./5/ Shuttle or expanded Muni service to the downtown area might be provided, or direct use of transit from home (San Francisco) or from suburban centers (East Bay, North Bay, Peninsula) could increase. Peninsula residents, for example, could find Southern Pacific commuter trains more attractive if they could get no closer to downtown with their cars than the train terminal at Fourth and Townsend Sts. All transit options would add to the burdens of the regional and local transit system, particularly Muni.

TRUCK DELIVERIES AND LOADING

The project is proposed to have service vehicle access on the second-floor level of the building via a ramp from Merchant St. Two loading bays would be provided, as required by the City Planning Code, Section 152. The bays would be sized to handle standard single unit trucks and smaller vehicles. Analysis of the ramp and mezzanine geometry indicates that single-unit trucks and large delivery vans would be able to negotiate the ramp into the loading area. Semi-trailer trucks would not be able to use the loading bays, and would be expected to unload from Merchant, Montgomery or Washington Sts.

Project demand would be for about four loading spaces./6/ The project would not meet the average demand for loading space with off-street loading facilities, as proposed. The existing loading zones on the Montgomery St. frontage would be able to handle the excess demand. However, due to the possibility of illegal parking in the loading zone, double parking might occur.

Access to the project's freight elevator from the loading docks would be provided via an accessway to the core of the building. The loading dock would be separated from the freight elevator by about 100 ft. of parking area. There would be direct access from the freight elevator to the building lobby and street-level uses.

Access to the on-site passenger vehicle parking areas is proposed via Merchant St. A ramp to the garage is proposed from Merchant St. and would provide sufficient maneuvering space for passenger vehicles. Delivery vehicles improperly using the loading area could block access to the ramp and/or prevent vehicles from entering or leaving parking spaces on the mezzanine level. There would be a full-time (at least 12 hours a day) garage attendant to insure proper use of the loading area and garage.

TRANSIT IMPACTS

Regional transit carriers, Southern Pacific Railroad, AC Transit, and Golden Gate Transit, are operating during their peak hours at less than 100% of their seated capacity in San Francisco. Muni, SamTrans and BART exceed seated capacity during peak hours. In the experience of most carriers, the p.m. peak is more intense than the a.m. peak./7/ Some Muni lines operate for a portion of the p.m. peak hour with passenger loads in excess of the recommended maximum, which is about 150% of seated capacity for trolley and motor coaches. Under these conditions passenger loading times are increased; schedule adherence and passenger comfort are adversely affected. Although the other carriers operate at less than seated capacity during a one-hour period, specific routes are shown to experience peak-of-the-peak loadings in excess of seated capacity for periods from five to 30 minutes during the peak hour.

An analysis was made of the cumulative transit impacts attributable to development in Downtown San Francisco. For all systems except the Muni, the analysis was conducted on a system level which considered the lines or groups of lines that serve the project area. For the Muni, a line-by line analysis was conducted according to the Department of City Planning guidelines./2/

Increased transit ridership from 29 proposed downtown developments was included in the 1984 base values (see Appendix D, Table D-8 p. 208). In addition, growth from other developments not specifically analyzed was considered through the use of a growth factor. The ridership from the projects was added to the estimated 1984 base ridership, and the demand-to-capacity ratios, or load factors, attributable to the project were determined.

As shown in Table 9, project ridership during the p.m. peak hour would not increase the transit loading by more than 0.3% on any of the non-Muni systems. This would not be a statistically significant change./8/ Analysis of the transit data leads to a reasonable assumption that for short periods of time (15 to 30 minutes) certain routes experience loadings nearer to 100% of total capacity than the loadings shown in Table 9. The loadings shown are the result of averaging ridership of full vehicles with partially empty vehicles, thus equalizing the loads over the one-hour period. As the cumulative demand increases, the length of time of peak loadings will increase, thus forcing a spreading of peak-of-the-peak conditions over time.

Of the 53 Muni lines serving the Downtown San Francisco area, roughly bounded by Brannan St., 11th St., Van Ness Ave., and Clay St., 36 operate within a walking distance radius of 2,000 ft. of the site (see Appendix D, Table D-10, p. 210, for Muni line analysis). With trips to be generated by the 29 developments referred to above, it is estimated that 26 of these lines would operate during the p.m. peak hour in 1984 beyond maximum recommended capacity (beyond 150% of seated capacity)./9/ Total ridership on these 36 lines would then be about 34,300 during the peak hour. The project would contribute about 150 peak-hour trips to these lines, representing a less than 1% increase. If prior users of existing public parking on-site were to switch to transit, the total number of new peak-hour trips attributed to the project would be 340, about a 1% increase.

PEDESTRIAN IMPACTS

The sidewalks serving the project site presently have unimpeded levels of pedestrian activity during the noon hour and the morning and evening peak periods. The crosswalks have moderate levels of activity. The pedestrian flows during the p.m. peak are generally more intense than those in the a.m. peak, and noon hour flows are generally equivalent to, or more intense than, the p.m. peak flows (see Appendix D, Table D-4, p. 205, for a description of pedestrian flow regimes). Pedestrian travel in crosswalks conflicts more with vehicular traffic during the p.m. peak traffic period than at the noon hour. Appendix D, Tables D-5 & D-6, p. 206, show existing 15-minute peak pedestrian flows and operating conditions on the sidewalks fronting the site.

TABLE 9: PROJECTED 1984 PEAK OUTBOUND TRANSIT CHARACTERISTICS
BASED ON CALCULATED GROWTH FACTORS

Agency	1984 Base*		1984 Base + Project		Diff.	% Inc.***
	Rider- Ship	% Occ**	Rider- Ship	% Occ		
MUNI****	33,300	---	33,480	---	180	0.7
BART						
Transbay	14,195	108	14,235	108	40	0.3
Westbay	8,250	86	8,280	86	30	0.3
A-C Transit	12,320	99	12,350	99	30	0.3
SamTrans	1,515	129	1,520	130	5	0.3
SPRR	6,020	55	6,040	55	20	0.3
Golden Gate						
Motor Coach	6,670	99	6,690	100	20	0.3
Ferry	1,555	75	1,560	75	5	0.3

* Outbound only; this represents a 32% increase in transit ridership over existing conditions due to cumulative development and transit growth, (see Appendix D-7)

** Percent of total capacity occupied.

*** Percent increase in projected 1984 Base ridership due to project

**** Load factors have not been included for MUNI due to the lack of reliable data.

SOURCE: Environmental Science Associates, based on information supplied by TJKM, Transportation Consultants

The Montgomery St. sidewalk pedestrian flow presently operate in unimpeded conditions during the noon and p.m. peak hours. The Washington St. pedestrian flows operate in unimpeded conditions during the noon hour.

The crosswalk in the west side of Montgomery St. across Washington St. operates at about 25-30% of capacity during the p.m. peak. On the south side of Washington St., the crosswalk across Montgomery St. operates at about 10% of capacity. Reservoir space requirements for people waiting to use the crosswalks do not block pedestrian flows on the sidewalks.

The project would increase pedestrian activity on the sidewalks fronting the site, and increases are also expected to occur as a result of future development in the project vicinity. Table 10 shows the pedestrian levels of operation for the projected 1984 conditions. The values shown in Table 10 for the 1984 Base conditions include applicable increases from the 29 buildings representing cumulative downtown development. Existing effective sidewalk width has been assumed for the future conditions.

The primary pedestrian access to the project would be on Montgomery St. The project would also be accessible from Washington and Merchant Sts. The addition of cumulative pedestrian travel would cause the p.m. peak-hour flows on Washington and Montgomery Sts. to cross into the next flow regime. The flow on the Montgomery St. sidewalk along the project site would become impeded; pedestrians would retain some freedom of walking speed, but indirect conflicts would occur. The project would cause an approximately 40% increase in the number of pedestrians on the sidewalks fronting the project during the p.m. peak hour.

The project would provide a pedestrian plaza/arcade and widened sidewalks along the Montgomery St. and Washington St. frontages. Access between Merchant St. and Washington St. would also be provided through the project.

NOTES - Transportation

/1/ The data for truck trips during the demolition, excavation, and construction periods are from Williams and Burrows, General Contractor, Belmont, California, letter communication, July 20, 1981.

TABLE 10: PROJECTED P.M. PEAK 15-MINUTE PEDESTRIAN VOLUMES IN 1984
(Project Side of Street)

Sidewalk	1984 Base			1984 Base + Project		
	Volume* P.M.	Rate** P.M.	Flow Regime*** P.M.	Volume P.M.	Rate P.M.	Flow Regime P.M.
Montgomery St.	235	2.2	Impeded	325	3.1	Impeded
Washington St.	100	0.8	Unimpeded	160	1.2	Unimpeded

*Pedestrians per 15 minutes per foot of effective sidewalk width.

**Pedestrians per minute per foot of effective sidewalk width.

***See Appendix D, Table D-4, p. 205 for definitions and volume criteria.

SOURCE: TJKM, Transportation Consultants

/2/ Trip generation, purpose, and regional distribution were obtained from Attachment 1. of the "Guidelines for Environmental Impact Review, Transportation Impacts", San Francisco Department of City Planning, October 1980. Travel mode assignments were made using Attachment 2., and the Muni analysis using Attachment 3., of this document. Residential trip generation was estimated from Report on Trip End Generation Research Counts (Vols. 1-12) CalTrans District 4, 1966-1980. Rates have been adjusted from vehicle trip ends to person trip ends based upon an assumed vehicle occupancy of 1.4 persons per vehicle.

/3/ To estimate the commuter or long-term parking demand, all of the auto driver work trips were assumed to generate demand for one parking space per trip or 240 spaces for the project. The non-work or short-term parking demand was calculated by dividing the non-work auto driver trips by a turnover factor based upon the average length of stay. The turnover factor was calculated by dividing a 9-hour working day by the average length of stay of 1.4 hours to give a factor of 6.4. Thus the average short-term (non-work) parking demand was calculated to be 50 spaces per hour for the project.

/4/ The parking inventory survey was conducted by TJKM, Transportation Consultants on January 20-23 and 26, 1981 and July 20-22, 1981.

/5/ Revisions to the Transportation Element of the Master Plan Regarding Parking, Resolution 7647, San Francisco Planning Commission, January 20, 1977.

/6/ Center City Circulation Program: Pedestrian Circulation and Goods Movement, Working Papers 1, 2, and 3 and Final Report, San Francisco Department of City Planning, 1980.

/7/ See Appendix D, Tables D-7 and D-9, taken from the 1981 Transportation Impact Study for the Montgomery/Washington Building, by TJKM Transportation Consultants for a more detailed breakdown of transit ridership characteristics.

/8/ The Transportation analysis can be considered accurate to within 10%. Thus, changes of less than 10% cannot be considered to be statistically significant.

/9/ The 36 affected Muni lines would be the 1, 1X, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 14, 14GL, 14X, 15, 21, 27, 30, 30X, 31, 31X, 38, 38L, 38AX, 38BX, 42, 45, 55, 71, 72, 80X, 83, J, K, and N.

E. AIR QUALITY

Air quality impacts associated with project operation would result primarily from vehicle emissions. Daily emissions in 1985, of pollutants resulting from project-related vehicular combustion, have been calculated and are shown in Table 11.

TABLE 11: PROJECTED DAILY PROJECT-GENERATED EMISSIONS IN 1985 (tons/day)
COMPARED WITH REGIONAL PROJECTIONS

	<u>Project Vehicular Combustion*</u>	<u>1985 Projected Regional Emissions**</u>
Carbon Monoxide	0.383	3,367
Hydrocarbons	0.033	797
Nitrogen Oxides	0.039	692
Sulfur Oxides	0.006	435
Particulates	0.004	192

*BAAQMD, 1979, EMFA 5 Vehicular Emission Factors.

**Association of Bay Area Governments (ABAG), BAAQMD, MTC, 1979, 1979 Bay Area Air Quality Plan, pp. 62-64. The region is the nine-County Bay Area Air Quality Management District.

SOURCE: Environmental Science Associates, Inc.

Roadside carbon monoxide (CO) levels were analyzed for worst-case meteorologic and dispersion conditions for streets carrying project-generated traffic; the results are shown in Table 12. The largest increase in CO concentrations due to the project, about 1% over the cumulative base case, would occur on Sansome St., between Pacific St. and Broadway. The highest eight-hour concentration, 8.8 ppm, would occur on Clay St. between Front and Davis Sts. No air quality standards are expected to be exceeded as a result of the project.

Operational emissions would result from natural gas combustion for space and water heating for the building and would occur at roof level. These emissions (primarily nitrogen oxides) would be negligible, relative to emissions from traffic. Electrical energy consumption would place an increased demand on local generation plants, possibly resulting in greater emissions from these facilities. No local impacts at the site would occur, although the regional burden of pollutants would increase.

TABLE 12: PROJECTED LOCAL ROADSIDE CARBON MONOXIDE IMPACTS*
(parts per million - ppm)

<u>Street</u>	<u>Averaging Time</u>	<u>1981</u>	<u>1984 Base**</u>	<u>1984 Base** plus project</u>
Washington (Between Sansome and Montgomery)	1-hour	18.0 ppm	13.9 ppm	14.0 ppm
	8-hour	9.8***	7.5	7.6
Montgomery (Between Washington and Clay)	1-hour	18.9	14.6	14.8
	8-hour	10.7***	8.2	8.3
Clay (Between Front and Davis)	1-hour	19.5	16.5	16.7
	8-hour	11.0***	8.8	8.8
Sansome (Between Pacific and Broadway)	1-hour	18.2	14.4	14.6
	8-hour	9.2***	7.1	7.2

* Calculations were made for worst-case dispersion meteorology according to BAAPCD (now BAAQMD), 1975 Guidelines for Air Quality Impact Analysis of Projects, Updated for EPA Supplement 8 Emissions Rates, 1978.

** Cumulative Downtown Development; Base includes 0.2% non-analyzed growth.

*** Values exceeding the applicable standard (35 ppm for one hour, 9 ppm for eight hours).

SOURCE: Environmental Science Associates, Inc.

IV. Environmental Impacts

Although not classified with regard to attainment status for lead standards, San Francisco last exceeded the federal ambient lead standard in 1977 (see Appendix E, Table E-1, p. 211); the major source of this lead is gasoline fuel. Traffic generated by the project would increase exhaust emissions of lead in proportion to the increase in vehicle-miles traveled. Regional ambient lead concentrations are expected to decrease in the future, as use of leaded gasoline decreases.

In summary, the project would add to local and regional accumulations of CO, hydrocarbons and nitrogen oxides, particulates, and sulfur oxides during adverse meteorological conditions. The recently adopted regional Air Quality Plan found that ozone, formed from hydrocarbons and nitrogen oxides, would continue to be a problem in the future, and that substantial reductions in hydrocarbon emissions would be necessary to attain and maintain the ozone standard in the Bay Area./1/ CO and particulates are also problems on a local scale. Because the project would increase emissions of hydrocarbons, CO, and particulates, attainment of the standards would be impeded. The project would probably have no measurable impact on citywide or regional concentrations or on the frequency of violations of the standards. Cumulative development could increase ambient concentrations and the frequency of standard violations, if the control strategies for other emission sources that are envisioned in the Air Quality Plan are not implemented.

The project's interior air quality would be controlled by a variable air-volume ventilation system and would provide about six air changes per hour. Air for ventilation would consist of a filtered mixture of outside air and recirculated air, and would maintain or surpass applicable outdoor air quality standards./2/

NOTES - Air Quality

/1/ ABAG, BAAQMD, and the Metropolitan Transportation Commission (MTC), January 1979, 1979 Bay Area Air Quality Plan, San Francisco Bay Area, Environmental Management Plan.

/2/ Robert Woods, Yoshpe Engineers, oral communication, October 26, 1981

F. CONSTRUCTION NOISE

Project construction would occur in three stages: demolition, site excavation, and construction. Throughout the 18-month construction period, trucks would initially haul away dirt and debris and then bring in building materials. Construction activities would temporarily increase noise levels at the site by 10 to 15 dBA.

The project would be expected to use a mat (cellular) foundation, which would not require pile driving. During construction, all powered equipment other than impact tools must comply with the San Francisco Noise Ordinance, which limits noise emissions to 80 dBA at a distance of 100 ft.

The Noise Ordinance prohibits construction work at night from 8:00 p.m. to 7:00 a.m., if noise from such work exceeds the ambient noise level by 5 dBA at the property line, unless a special permit is authorized by the San Francisco Department of Public Works. During construction, many types of equipment are used. Typical demolition and construction noise levels anticipated for the project are shown in Table 13.

The Holiday Inn, adjacent to the site, would be the most sensitive receptor of construction noise. Although the hotel wall facing the site is constructed of at least one-ft.-thick concrete, interior noise levels during project construction would be expected to reach 46 dBA. At this level, construction sounds would be audible, but would not interfere with human speech or sleep. Noise levels in the adjacent 601 Montgomery St. and Transamerica buildings could reach as high as 65 dBA, with windows closed, and would average about 60 dBA. Such noise levels would interfere with human speech and concentration, distracting employees and requiring raised voices to communicate. Presently, the interior noise levels in buildings adjacent to the site are estimated to be about 45 dBA, with peak incidental noise levels determined by interior activity.

TABLE 13: TYPICAL COMMERCIAL/INDUSTRIAL CONSTRUCTION NOISE LEVELS AT 50 FEET

<u>Construction Phase</u>	<u>Average Noise Level</u>
Ground clearing	84 dBA
Excavation	89
Foundations	78
Erection	85
Finishing	89

SOURCE: Bolt, Beranek, and Newman, December 31, 1971, Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, U.S. Environmental Protection Agency, p.20.

G. ENERGY

PG&E obtains a portion of its electrical energy from renewable resources including geothermal and hydroelectric power, but will meet new demands for energy primarily by increasing the use of nonrenewable coal, oil, natural gas and nuclear fuels. Among the new power plants which are anticipated by PG&E in the near future are the Diablo Canyon nuclear power plant in San Luis Obispo County and new geothermal plants in the Mayacmas Mountains. In response to a directive of the State Public Utilities Commission, PG&E will also be required to increase generating capacity from co-generation projects, which generate electricity in combination with industrial processes that already use fossil fuels as a source of heat. PG&E also anticipates increased purchases of electricity from other utilities; this power would come primarily from hydroelectric and nuclear power plants in the state of Washington.

During the construction period, an estimated energy consumption of about 440 billion British Thermal Units (Btu) at-source would be required./1/ This

value is equivalent to about 74,800 barrels of oil (bbl/oil) and includes the energy required for fabrication and distribution of materials, as well as direct energy consumption. Direct energy consumption at the site would represent approximately 18% of total construction energy consumption. An estimated 78 billion Btu at-source (13,200 bbl/oil equivalents) would be consumed for site excavation, transportation of materials and building construction.

The project would meet State energy conservation requirements, established by the California Energy Commission./2/ The proposed structure has passed the Prescriptive Envelope Test indicating conformance with Title 24./3/ As the project passed the Envelope Test, Title 24 states that a budget analysis would not be required. Projected total energy use for the project would be 175,000 Btu at-source per sq. ft. per year. The air distribution system would be a variable air volume circulation system and would provide individual zone control. Each floor would be equipped with an individual fan system for use during business hours.

The internal heat generated by the project would be reclaimed by the use of a fan/coil unit at each floor which would deliver warm air to the building perimeter to replace heat lost through the building skin. Only if reclaimed heat were insufficient to maintain comfort levels would the building's hot water space heating system be used. Air conditioning would consist of a central mechanical water-chilling plant with energy management controls to optimize load demand. The cooling tower would be used for pre-cooling operations. The air conditioning would be used only after the cooling capabilities of the cooling tower water were exhausted. Air conditioning for condominiums would be by closed circuit water-to-air heat pumps. Heat rejection produced by the office lights and computer would be made available through heat exchangers to augment the heating of the condominiums.

The electrical system of the office portion of the project would have load-shedding capability. That is, during peak periods of electrical demand when PG&E is in danger of brownouts, the project could systematically shut off the circulation fans and other electrical connections for several minutes as

necessary. The fans and other electrical connections could then alternately be turned on and off, by floor, to sustain this load reduction.

The project would provide an electrical lighting level of 65 to 75 footcandles, with emphasis on task lighting./4/ The northeast corner of the project would contain a series of setbacks and consist of a glass facade. This portion of the building would not receive direct sun during most periods, and would thus allow extensive use of natural lighting in this portion of the building, decreasing the need for artificial lighting without increasing cooling requirements. The project would include a rooftop swimming pool which would use waste heat from the office portion of the building. The condominiums would all include operable windows as a further energy conservation measure. Estimated project energy consumption is shown in Table 14.

The project would have a connected kilowatt load of 2,229 and 851 kilowatts for the office and condominium portions of the building, respectively./5/ The office portion of the building would require about 399,000 kilowatt hours (KWH) per month, the equivalent of about 695 barrels of oil, and 4.8 million KWH or 8,340 barrels of oil equivalents per year. This represents an electrical demand of about 20 KWH per sq. ft. per year as compared to an estimated average electrical demand of 19 KWH per sq. ft. per year for other typical highrise office buildings recently proposed in San Francisco./6/ Peak at-source electrical demand for the offices would be about 1880 KWH or 19.2 million BTU at-source (3.3 barrel of oil equivalents.) This peak would occur at 4:00 p.m. on mid-July afternoons and would not coincide with the PG&E system-wide (northern California service area) peak demand period which occurs on August afternoons. Estimated average daily and annual electrical distribution curves are shown in Figures 25 and 26, p.104 - 105.

The condominiums would require 450,000 KWH per year (the equivalent of 790 barrels of oil), or about 37,500 KWH per month, an electrical demand of about 6.7 KWH per sq. ft. per year. Peak at-source electrical demand would be 170 KWH, equivalent to 1.7 million at-source BTU, or 0.3 barrels of oil. This would occur at 6 p.m. on December evenings and would not coincide with the PG&E peak which occurs in August.

TABLE 14: ESTIMATED ANNUAL PROJECT ENERGY CONSUMPTION

<u>OFFICE</u>	<u>Units of Energy (in Thousands)</u>	<u>At-Source Resource Use (billions of BTU)*</u>	<u>Barrel Oil Equiv. (BBL. Oil)</u>
Electricity	4,790 KWH	49.02	8,340
Natural Gas	3,620 cu. ft.	3.98	680
Gasoline**	200 gal.	28.00	4,760
<u>CONDOMINIUMS</u>			
Electricity	450 KWH	4.61	790
Natural Gas	2,070 cu. ft.	2.28	390
Gasoline**	2.5 gal.	<u>0.35</u>	<u>60</u>
	TOTAL PROJECT	88.24	15,020

*1 KWH = 10,239 at-source BTU

1 cubic foot = 1,100 at-source BTU

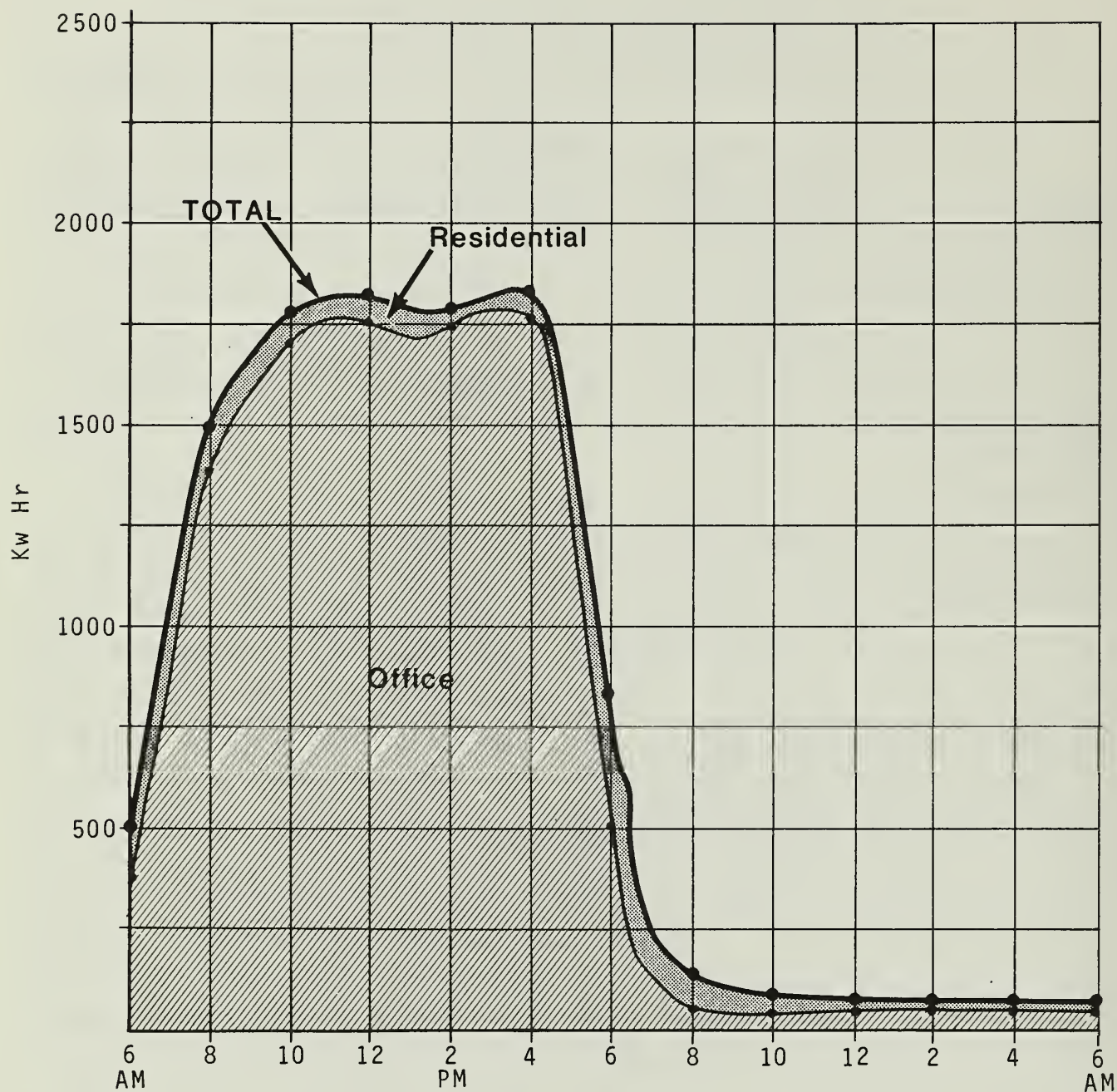
1 gallon = 140,000 at-source BTU

1 BBL. Oil = 5.88 million at source BTU.

**for vehicular trips generated by the project

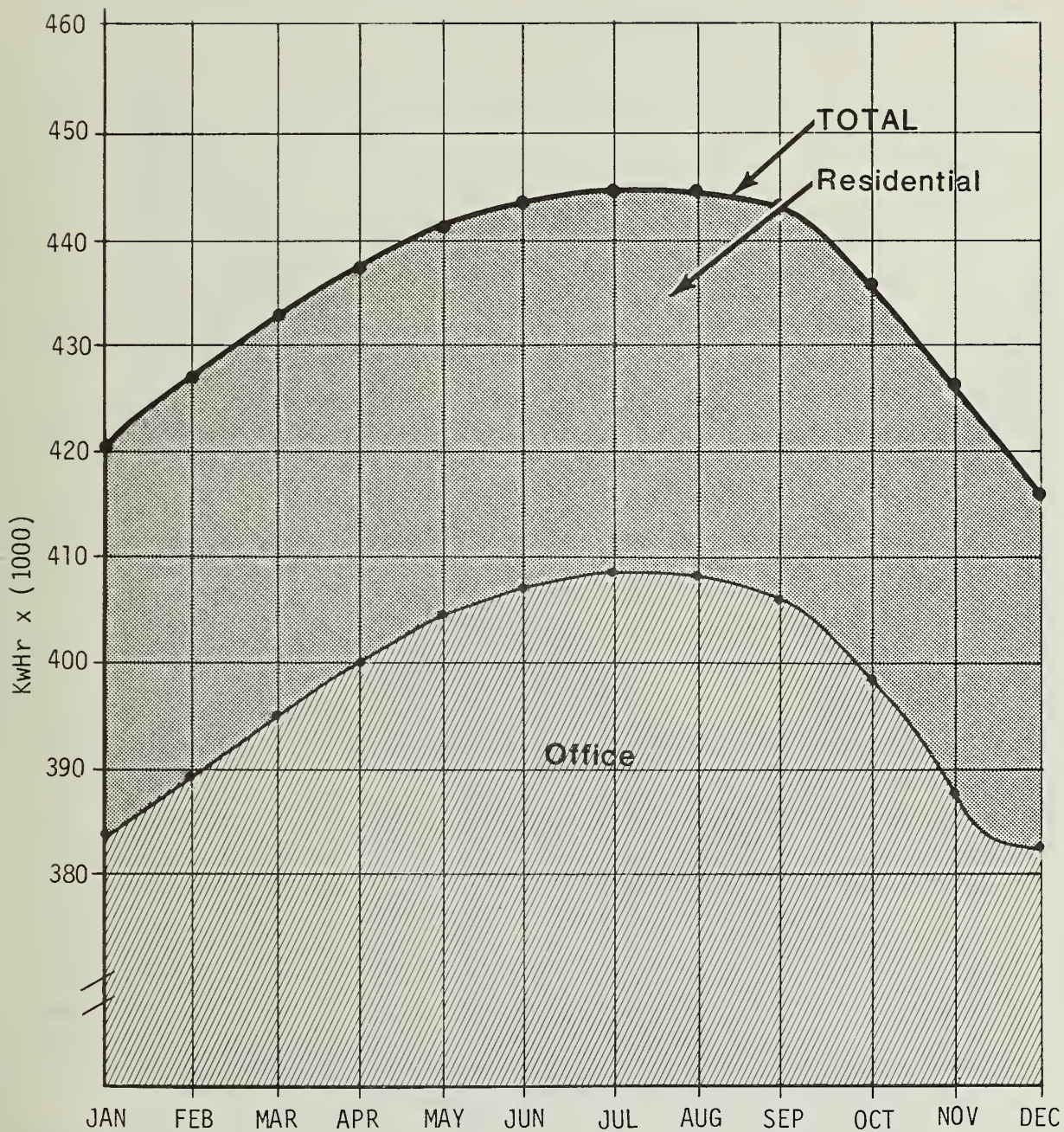
SOURCE: Environmental Science Associates, Inc. and Yoshpe Engineers

The project would require a total of about 5.7 million cu. ft. of natural gas per year, 3.6 million for offices and 2.1 million for the condominiums. Estimated monthly natural gas use for the offices would be about 300,000 cubic ft. or 0.3 billion BTU. This represents a consumption of about 15 cu. ft. per sq. ft. per year as compared to a projected average of 26 cu. ft. per sq. ft. per year for recently proposed high-rise buildings in San Francisco, or 11 cu. ft. per sq.ft. less for the project. Peak demand for natural gas for the office portion of the building would be about 4,400 cu. ft. per hour, equivalent to 0.8 barrels of oil, and would occur at 6:00 a.m. on weekday



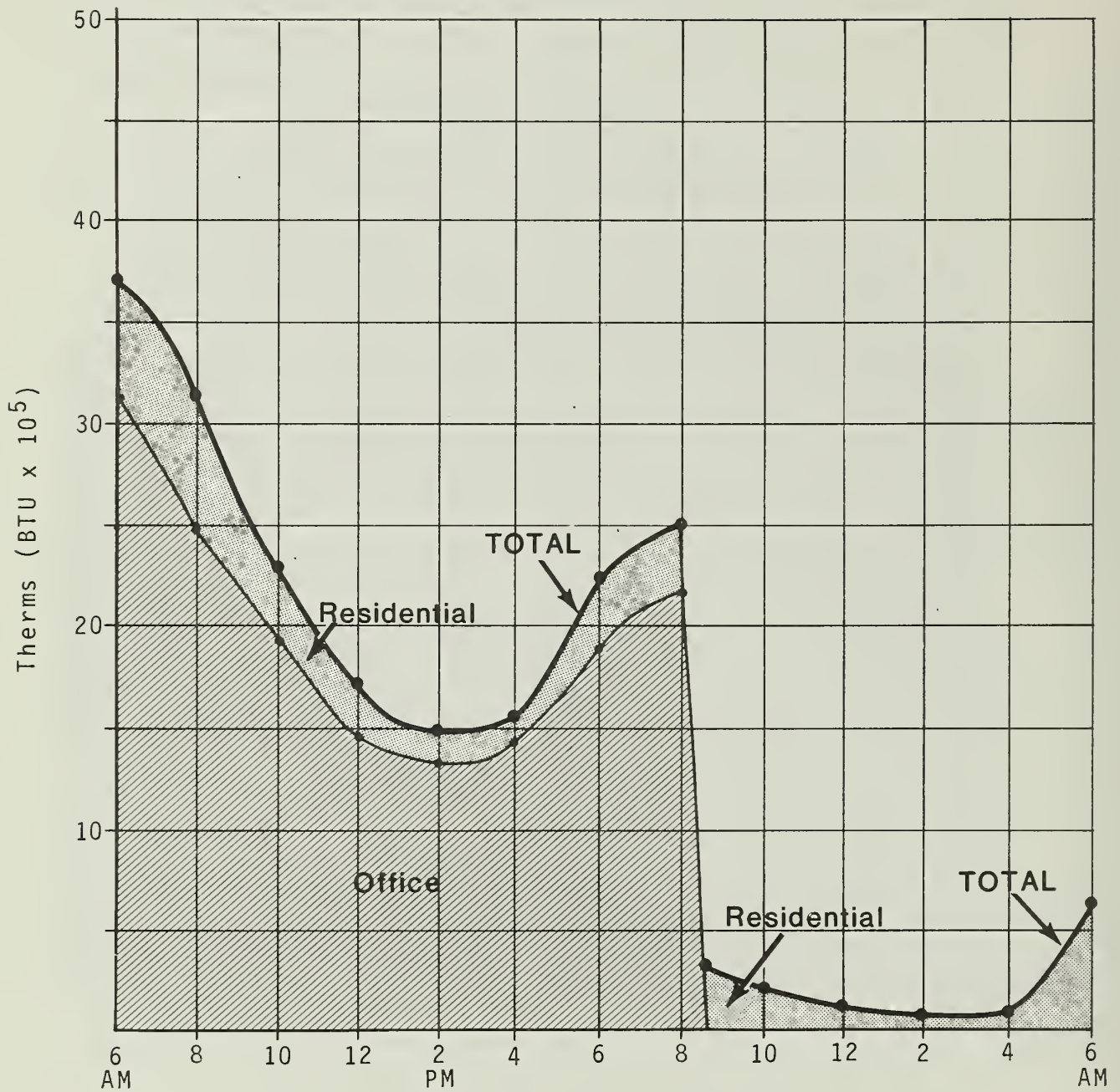
SOURCE: Environmental Science Associates, Inc. and Yospe Engineers

FIGURE 25: Estimated Average Daily Electrical Load



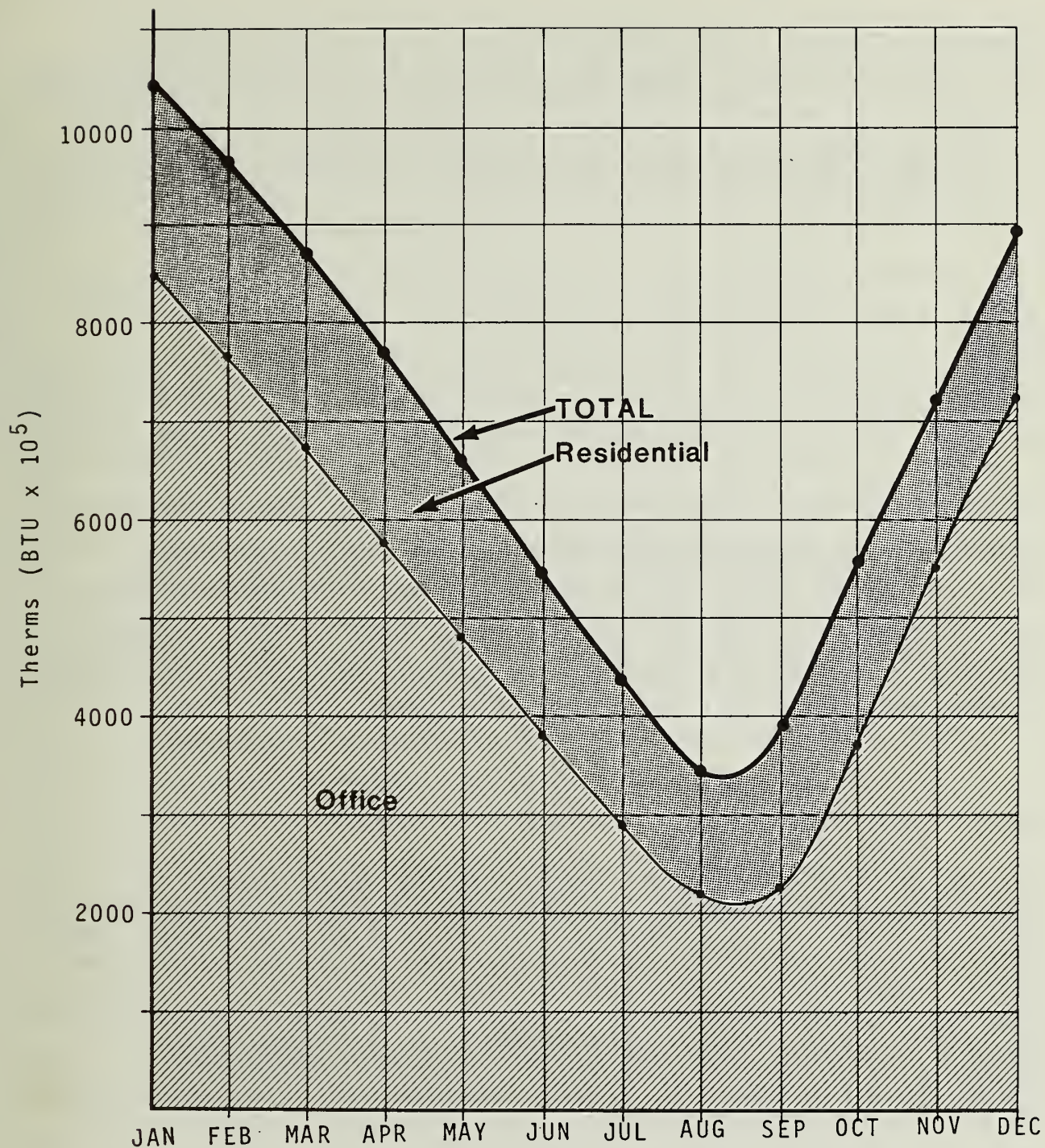
SOURCE: Environmental Science Associates, Inc. and Yosphe Engineers

FIGURE 26: Estimated Annual Electrical Load



SOURCE: Environmental Science
Associates, Inc. and
Yosphe Engineers

FIGURE 27: Estimated Average Daily
Natural Gas Consumption



SOURCE: Environmental Science Associates, Inc. and Yosphe Engineers

FIGURE 28: Estimated Annual Natural Gas Consumption Curves

mornings in January. This would not coincide with the PG&E (northern California service area) system-wide peak period for natural gas which occurs in the early evening hours in January. Estimated annual and average daily natural gas distribution curves for the project are shown in Figures 27 and 28, pp. 106 - 107.

The condominiums would consume an estimated 175,000 cubic ft. (0.2 billion BTU) of natural gas per month. This represents consumption of about 32 cu. ft. per sq. ft. per year of natural gas. Peak demand for natural gas would be about 3,600 cu. ft. per hour and would occur at 6:00 a.m. on February mornings; this would not coincide with the PG&E evening January peak period.

The projected increase in vehicle fuel use for the traffic generated by the project would total about 200,000 gallons of gasoline per year (about 28 billion BTU at-source, or 4,800 barrels of oil). This projected use is based upon the mix of vehicles expected in California in 1985. In general, statewide vehicle fuel use is expected to decrease until 1995 as the vehicle fleet becomes more efficient, and fuel more expensive.

NOTES - Energy

/1/ Btu, British thermal unit, A standard unit for measuring heat. Technically, it is the quantity of heat required to raise the temperature of one pound of water 1 degree Fahrenheit (251.98 calories) at sea level. The term 'at-source' means that adjustments have been made in the calculation of the Btu energy equivalent to account for losses in energy which occur during generation and transmission of the various forms of energy as specified in: ERCDC, 1977, Energy Conservation Design Manual for New Nonresidential Buildings, Energy Resources Conservation and Development Commission, Sacramento, CA; and Apostolos, J.A., W.R. Shoemaker, and E.C. Shirley, 1978, Energy and Transportation, Sacramento, CA. (Project 20-7, Task 8).

/2/ California Energy Commission, July 26, 1978, Regulations Establishing Energy Conservation Standards for New Residential and new Nonresidential Buildings, Title 24 of the California Administrative Code.

/3/ Dan Yoshpe, Yoshpe Engineers, oral communication, October 7, 1981.

/4/ One footcandle is the amount of light produced by one candle at a distance of one foot.

/5/ Connected kilowatt load is the total load of all electrical facilities in the building if they were to operate at the same time.

/6/ Five Fremont Center FEIR, (EE 80.268, Certification Date March 12, 1981) Comparisons are based upon the projected energy uses for high-rise office buildings proposed since 1975, the year the State Energy Commission began to regulate energy use in nonresidential buildings.

H. GROWTH INDUCEMENT

The project would add about 200,000 net leasable sq. ft. of office space and 4,000 sq. ft. of retail/restaurant space; about 1,200 sq. ft. of restaurant space would be removed from the Financial District. Employment at the site would increase by about 950, from about 10 to about 960. Occupants are not presently known, but would probably include tenants expanding or relocating from other San Francisco locations, tenants relocating from outside San Francisco, and firms new to the Bay Area. Therefore, the increase in employment at the project site would not necessarily represent employment that is new to San Francisco. If the building were fully leased and the office space provided by the project did not create permanent vacancies in other San Francisco office buildings, total employment in San Francisco would eventually increase directly by about 950 jobs due to the project. Approximately 1,140 additional jobs would be indirectly supported in San Francisco through the multiplier effect (see Section IV., Employment, Housing, and Fiscal Factors, p. 71).

This overall growth would be in response to the increasing demand for office space in San Francisco's Financial District. This demand would exist whether or not the proposed project were built. The demand for office space continues the trend of strong growth in service sector and headquarters office activities and employment in San Francisco. The increases in downtown office space and employment would contribute in turn, to continued growth of local and regional markets for goods, services and housing.

It is expected that some downtown workers would desire to live in San Francisco. Employment growth, however, may not directly correspond to increases in demand for housing and City services to residents, as some new jobs would be held by individuals who already live in the City but who

previously either did not work or worked outside the City, or by those who prefer to live in surrounding communities or by those who would not be able to afford or locate housing in the City.

Any net increase in employment downtown would increase the demand for retail goods and food services in the area. By increasing office employment, the project would intensify the demand for retail goods and food services. Some of this demand would be met by the proposed 4,000 gross square feet of retail/restaurant space on the ground floor of the project.

Increases in employment downtown would also increase demand for business services, to the extent that the expanded space would not be occupied by firms providing those services. In response, demand would increase for existing space and possibly for further new development.

The proposed provision of about 40 condominium apartments in the project could generate a demand for some resident-serving retail services. To the extent that they are not located within the project, new facilities could be induced to locate nearby. The placement of residential units in this location could tend to encourage other new developments in the Financial District to include housing.

An amendment to the City Planning Code to allow the amount of on-site housing proposed by the project would have an impact on subsequent development in the C-3 District (see Section IV, Land Use, p.46). Such a modification of the Code would encourage the provision of additional on-site housing in future high-rise developments. Larger buildings than are presently permitted would be possible on sites of less than 1/2 an acre; such small sites do not presently qualify as Planned Unit Developments under Section 304 of the Code. It is likely that such an amendment to the Planning Code would result in buildings which exceed the maximum FAR and height recommendations contained in the Department of City Planning document Guiding Downtown Development. It is not possible to determine the exact location, size, or number of buildings which might be proposed as a result of such a change in the Planning Code.

Modification of the Planning Code to allow approval of the project would generally encourage more housing units in the C-3 District. An increase in housing would result in greater development of residential retail facilities and domestic conveniences, as well as greater 24-hour activity, in the Downtown.

V. MITIGATION MEASURES PROPOSED TO MINIMIZE THE POTENTIAL IMPACTS OF
THE PROJECT

In the course of project planning and design, measures have been identified that would reduce or eliminate potential environmental impacts of the proposed project. Some of these measures have been or would be adopted by the project sponsors or their architects and contractors, some are under consideration by the project sponsors and others have been rejected by the sponsors.

Each mitigation measure and its status are discussed below. Where a measure has been rejected, the reasons for its rejection are discussed.

A. LAND USE AND ZONING

MEASURE PROPOSED AS PART OF THE PROJECT

1. The project sponsor would urge the Board of Supervisors that the portion of the proceeds from the sale of Lot 25, which represent the difference between the actual acquisition costs for the property and the sale price, be used to purchase land for open space in Chinatown.

B. URBAN DESIGN

MEASURES PROPOSED AS PART OF THE PROJECT

2. The project's sculptured upper-level facade is intended by the architect to (1) reduce the apparent scale and bulk of the building; (2) provide visual interest to viewers from Telegraph Hill, Columbus Ave. and the Jackson Square District; and (3) serve as an apparent transition in height from the taller high-rise buildings of the C-3-0 district which frame the project to the low-rise structures of the Jackson Square District, north and northeast of the site.

3. The project would include pedestrian amenities; pedestrian-scale retail activity; and sidewalk space designed to improve pedestrian access to work, shopping and passive recreation spaces and transit facilities, and to contribute to a visually interesting streetscape. Proposed pedestrian amenities include street trees and sidewalk plantings, multiple building entrances, widened sidewalks and ground-floor commercial activity. Ground-floor commercial activity would include uses such as a restaurant, apparel store, stationery store and/or travel agency. Retail space would not include any financial institutions although an automatic banking terminal may be provided.
4. The project would include street trees and sidewalk plantings on Montgomery and Washington Sts. Entry plazas, the residential lobby, and the pool area would be landscaped. Street-side glass walls, vegetation, or other screening would be used to provide pedestrian protection in the covered walkway area and to modify the project's wind effects on pedestrians.
5. The project sponsor would use a decorative paving material on the Merchant St. sidewalk fronting the site to enhance pedestrian interest, and would consider installing decorative paving on Merchant St., after consultation with other property owners and the Department of Public Works
6. The project would provide open space on the upper levels of the building for use by residents, in an amount greater than that required by Section 135 of the Planning Code.
7. The project sponsor would install a windscreen at the swimming pool area (either a roof above the area, a landscaping screen, or walls surrounding the area) to decrease wind turbulence.

C. EMPLOYMENT, HOUSING, AND FISCAL FACTORS

MEASURES PROPOSED AS PART OF THE PROJECT

8. The project sponsor would financially assist the existing restaurant and parking lot tenants in relocation activities. The two professional tenants have leases which expire in December 1981, and will not receive relocation assistance from the project sponsor.
9. The project would contain a total of about 90 bedrooms in about 40 residential condominiums. These units would vary from 1,200 to 2,400 sq.ft., providing a range in size. Project housing would help mitigate increased demands on the City's housing supply, which may be generated by the project's office development, although the project would not satisfy the generated residential demand in full.

MEASURE WHICH COULD BE REQUIRED BY THE CITY PLANNING COMMISSION

10. According to the formula set down in the Memorandum, "Housing Requirement for Office Development in San Francisco" (Dean Macris, Director Department of City Planning, July 1, 1981), the project would generate a demand for 210 residential units in San Francisco. Forty, large units are proposed as part of the project. The City Planning Commission could require the project sponsor to satisfy the remainder of the demand by development of units off-site, or by other means such as contributions to a non-profit housing development corporation.

D. TRANSPORTATION, CIRCULATION AND PARKING

MEASURES PROPOSED AS PART OF THE PROJECT

11. The project sponsor would participate proportionately in whatever legal means is finally adopted by the Board of Supervisors to contribute funds for an established Downtown transit assessment district to meet the peak demands caused by cumulative office development in the Downtown area.

12. A transportation broker would be located in the project management office to encourage transit use through the sale on-site of BART and Muni passes to employees, and to encourage employee car pool and van pool systems in cooperation with RIDES for Bay Area Commuters by providing a central clearinghouse for car pool and van pool information.
13. The project sponsor would provide secure bicycle parking facilities to encourage the use of bicycles by employees and messengers. Handicapped parking and handicapped access facilities would be provided in the proposed parking garage.
14. During the construction period, construction truck movement would be limited to the hours between 9:00 a.m. and 4:00 p.m. to minimize peak-hour traffic conflicts. The project sponsor and construction contractor would meet with the Traffic Engineering Division of the Bureau of Engineering to determine feasible traffic mitigation measures to reduce traffic congestion during construction.
15. Project contractors would place paving, landscaping and structures in the sidewalk area (subject to review and approval of the Department of Public Works) so as to minimize interference with pedestrian traffic.
16. Building directories and visual aids indicating the location of the freight elevators would be placed in the loading area of the building. This measure would be consistent with off-street loading recommendations contained in the Department of City Planning document Guiding Downtown Development.
17. The project would include about 40 parking spaces for the residential portion of the building, or 30 spaces more than the residential parking requirement of one space for each four dwelling units in the C-3-0 District, as defined by Section 151 of the City Planning Code. The remaining parking spaces would be designated as short-term spaces, in compliance with Objective 1, Policy 4 of the Downtown Transportation Plan, which discourages long-term parking in the Downtown.

18. Preferential parking would be provided for car pools, van pools, handicapped and short-term parkers, and residential tenants in relation to demand generated by the project. Actual allocations of reserved spaces among these users have not been determined; they would be determined by the transportation broker and project sponsor after occupancy of the building as demand becomes known.
19. A garage attendant would be employed to insure proper use of the loading area and garage and prevent delivery vehicles from blocking access to the parking ramp or parking spaces on the mezzanine level. The garage attendant would be employed for a minimum of 12 hours per day; if desired by the condominium homeowners association, the garage would be attended on a 24-hour basis.
20. The building would have "eyebolt" fixtures suitable for suspending MUNI trolley wires on the Montgomery and Washington St. frontages, in accordance with recommendations of the MUNI planning department.
21. Upon project completion the project sponsor would encourage tenant firms to implement a flexible time ("flex-time") system for employee working hours (flex-time is designed to reduce peaks of congestion in the transportation system).
22. Within a year of full occupancy of the project, the project sponsor would conduct a survey, in accordance with methodology approved by the Department of City Planning, to assess actual trip generation patterns of project occupants and actual pick-up and drop-off areas for car pools and van pools. The project sponsor would make this survey available to the Department. Alternatively, at the request of the Department, the sponsor would provide a fair and equitable in-lieu contribution toward an overall transportation survey for the downtown area to be conducted by the City.
23. To minimize cumulative traffic impacts due to lane closures and street excavation during construction, the project sponsor would coordinate with construction contractors for any concurrent nearby projects that are planned for construction, or later become known.

24. The project sponsor would require, by contract, that the general contractor provide off-street parking for construction workers on the project site or at an off-site location, to minimize demand for on-street parking by construction workers.

MEASURES THAT COULD BE IMPLEMENTED BY PUBLIC AGENCIES

25. The overload that would occur in Muni, BART, A-C Transit and the SamTrans mainline route (highway 101) due to cumulative development in the Downtown area could be mitigated by provision of additional buses, by headway changes, and possibly by shifts in routes. Implementation of this mitigation measure by the applicable transit carriers would depend primarily on the availability of funds and on actions initiated by MTC and the respective transit agencies and districts.
26. Pacific Gas and Electric Company could coordinate work schedules with other utilities requiring trenching, so that street disruption would take place during weekends and off-peak hours. This would be done through the San Francisco Committee for Utility Liason on Construction and Other Projects (CULCOP)

MEASURES REJECTED

27. The provision of loading facilities to accommodate semi-trailers has been rejected by the project sponsor due to the configuration of the proposed parking facility and to lack of space.
28. The provision of four off-street loading spaces, two more than required by Code, has been rejected by the project sponsor due to the configuration of the proposed parking facility and to lack of space.

E. AIR QUALITY

MEASURES PROPOSED AS PART OF THE PROJECT

29. During excavation, the general contractor would sprinkle unpaved demolition and construction areas with water at least twice a day to hold down dust. This would reduce particulate emissions (dust) by about 50%.
30. The general contractor would maintain and operate construction equipment in such a way as to minimize exhaust emissions. During construction, trucks in loading or unloading queues would be kept with their engines off when not in use, to reduce vehicle emissions.

F. NOISE

MEASURES PROPOSED AS PART OF THE PROJECT

31. The project contractor would comply with all requirements of the San Francisco Noise Ordinance, including limiting noise emissions from powered construction equipment at 80 dBA at a distance of 100 ft. The project contractor would muffle and shield intakes and exhausts, shroud or shield impact tools, and use electric-powered rather than diesel-powered construction equipment, as feasible. There would be no pile driving.
32. Prior to construction, the project sponsor would meet with the Holiday Inn management to negotiate arrangements for identified hotel "daytime sleepers" to be assigned hotel rooms located farthest from the construction site and noise sources. Additional measures would be arranged if necessary and as feasible, by the Department of Public Works, for hotel and adjacent office uses.
33. The project would comply with Title 25 of the California Administrative Code regarding noise insulation for residential uses.

34. The general contractor would construct barriers around the site, and around stationary equipment such as compressors, which would reduce construction noise by as much as 5 dBA. The general contractor would locate stationary equipment in pit areas or excavated areas as these areas would serve as noise barriers.

G. ENERGY

MEASURES PROPOSED AS PART OF THE PROJECT

35. Wherever possible, office suites would be equipped with individual light switches, time clock operation and fluorescent lights, to conserve electric energy. A centralized management computer system would monitor off-hour (evenings and weekends) heating and air-conditioning use and tenants would be charged for off-hour heating and air-conditioning service used, which would be a conservation incentive.
36. The heating, ventilating and air conditioning (HVAC) system would be equipped with an economizer cycle to use cooling tower water for cooling, when feasible. The HVAC system would be designed to recycle waste heat to heat the project swimming pool and residential units.
37. Residential units would have a master gas meter for all units. Individual electric service would encourage energy conservation.
38. Residential and office water heating systems would be insulated to minimize waste heat and water use. In residential units, if individual water heaters were to be provided, they would be placed as close as possible to the source of use (sinks, showers, dishwashers), to minimize wastewater and waste heat.
39. The project sponsor and project engineer have met with the Energy Conservation Department of the Public Utilities Commission to present measures proposed as part of the project that would be taken to assure energy conservation.

- 40. The project would comply with energy conservation requirements of Title 24 of the California Administrative Code.
- 41. Project energy use would be monitored and/or controlled by an automated Energy Management System.
- 42. The project would provide containers, to be located on the parking level, available to tenants of the entire building for collection and storage of recyclable solid wastes (such as glass, metal, computer cards, and newspaper) and the building manager would contract for recycling service.

MEASURES UNDER CONSIDERATION

- 43. The project sponsor could investigate the feasibility of passive or active solar features for residential units and common areas; such features could be incorporated into the project, if proven feasible.
- 44. The project sponsor could investigate the use of openable windows for the commercial portions in the building and install if feasible.

MEASURES REJECTED

- 45. The project sponsor has considered solar heating of the proposed swimming pool. This measure was rejected because project engineers have determined that use of waste heat from the office portion of the building would be more economically feasible and efficient than solar energy for this use.
- 46. Double or triple paned windows were rejected because they would unnecessarily insulate the building, would, therefore, increase the cooling demand of the project, and would represent increased energy costs and consumption for fabrication of building materials.
- 47. Use of natural gas in the condominiums for cooking and heating was rejected because it would be infeasible to individually service the condominiums. Individual metering at ground level with separate service pipes to the condominium levels would require too much area to be

practical. Piping of natural gas to those heights, also has an associated safety hazard. Natural gas for the condominiums would be used only in the domestic central hot water heater.

H. CULTURAL

MEASURES PROPOSED AS PART OF THE PROJECT

48. Should evidence of cultural or historic artifacts of significance be found during project excavation, the Environmental Review Officer and the President of the Landmarks Preservation Advisory Board would be notified. The project sponsor would select an archaeologist to help the Office of Environmental Review determine the significance of the find and whether feasible measures, including appropriate security measures, should be implemented to preserve or recover such artifacts. The Environmental Review Officer would then recommend specific mitigation measures, if necessary, and recommendations would be sent to the State Office of Historic Preservation. Excavation or construction which might damage the discovered cultural resources would be suspended for a maximum of four weeks to permit inspection, recommendation and retrieval, if appropriate.
49. The project sponsor would install a plaque on the project site to commemorate the history of the Bolton & Marron Building, listed in the California Historic American Building Survey.

I. LAND (Topography, Soils, Geology)

MEASURES PROPOSED AS PART OF THE PROJECT

50. A detailed foundation and structural design study has been conducted for the building by a California-licensed structural engineer and a geotechnical consultant. The project sponsor would follow the recommendations of these studies during the final design and construction of the project.

51. The project sponsor would post a surety bond, if required by the San Francisco Department of Public Works, before issuance of a permit to excavate. Such a bond would protect the City against damages to City-owned sidewalks, streets and utilities.
52. The project sponsor would require the project contractor and sub-contractor to obtain a Faithful Performance and Payment Bond, if proper financial capability is not evident, and to be responsible for any damage to existing buildings which might result from excavation. This bond would protect the project sponsor and owners of adjacent properties if any damage to these properties were to result from construction activities.
53. Excavation pit walls would be shored up and protected from slumping or lateral movement of soils into the pit. Shoring and sheeting with soldier beams could be used for this purpose. The contractor would comply with the Excavation Standards of the California Occupational Safety and Health Agency (Department of Industrial Relations).
54. Montgomery, Washington and Merchant Sts. would be mechanically swept by the demolition and excavation contractors, as required by the San Francisco Building Code, so that silt would not be washed into the storm drains and dust would be reduced. This would be a provision of excavation and demolition contracts.
55. Groundwater observation wells would be installed for monitoring the level of the water table and other instruments to monitor potential settlement and subsidence. The City would require a lateral and settlement survey to monitor any movement or settlement of surrounding buildings and adjacent streets during the dewatering. Control lines and benchmarks would be established for monitoring horizontal and vertical movement. Costs for the survey and any necessary repairs to services under the streets would be borne by the contractor.

56. If, in the judgment of City engineers, unacceptable subsidence occurs during the construction, groundwater recharge would be begun to halt the settlement. This might cause a delay in construction.
57. Groundwater pumped from the site would be retained in a holding tank to allow suspended particles to settle, if this is found necessary by the Industrial Waste Division of the Department of Public Works, to prevent sediment from entering the storm drain/sewer lines.

J. UTILITIES AND PUBLIC SERVICES

MEASURES PROPOSED AS PART OF THE PROJECT

58. To reduce the demand on police protection services, the project would incorporate internal security measures such as a 24-hour staffed guard station in the lobby area; closed circuit television cameras and internal security personnel; well-lighted entries; alarm systems; separate security elevator and locked entrances with telephones for the residential portion of the building; and computerized office and residential entrances accessible only by pre-programmed magnetic keys.
59. The project would incorporate all emergency response systems stipulated by the Life Safety Code, including fire alarms, an emergency communication system, an emergency power supply and an on-site emergency water supply. These measures would reduce hazards to building occupants during an earthquake or fire.
60. The project would incorporate low-flow faucet and toilet fixtures to reduce water consumption and wastewater.
61. The building would be equipped with a trash compactor to reduce the volume of solid waste requiring storage and transport. Separate storage facilities for recyclable waste material would be provided for both office and residential uses.

VI. Significant Environmental Effects

VI. SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED

B. URBAN DESIGN

The project would shade streets and sidewalks in the project vicinity; no public parks, including Portsmouth Square and the Transamerica Redwood park, would be shaded. The project would add to the shadows cast by the existing 601 Montgomery, Holiday Inn, and Transamerica buildings, and would complete shading of portions of Montgomery St., Washington St. and Columbus Ave. by eliminating existing corridors of sunlight between combinations of existing structures. Portions of the widened sidewalk and seating area on the north side of the Transamerica Pyramid would be shaded in the late afternoon at all seasons of the year.

The project would increase northwesterly wind speed ratios from moderately low to moderate on Montgomery St., east of the site and at the Columbus Ave./ Montgomery St./Washington St. intersection. Westerly winds would be increased 15% on Washington St. north of the site with a vortex appearing midway between Kearny and Montgomery Sts.

C. EMPLOYMENT, HOUSING AND FISCAL FACTORS

The project would result in an increase in office space of about 233,300 gross sq. ft. and an increase of about 88,100 gross sq. ft. of residential floor space. The project would also result in the loss of 1,200 gross sq. ft. of reataurant space. The project would accommodate an increase in on-site employment of as many as 950 employees and would require displacement of 4 businesses and a parking lot (a total existing employment of 13 persons).

VI. Significant Environmental Effects

F. TRANSPORTATION, CIRCULATION AND PARKING

The project would provide about 62 on-site parking spaces and would generate a demand for about 290 daily parking spaces, resulting in a projected daily parking deficit of about 230 project-related spaces.

The project would contribute to cumulative impacts on Muni and other transit agencies; the project would increase transit ridership and transit loading by up to 0.3% on non-Muni systems and about 1% during the peak-hour on Muni systems.

G. AIR QUALITY

Project-related emissions would have no measurable impact on local or regional concentrations and would not increase the frequencies of standards violations, but would contribute to impacts from cumulative Downtown development.

H. ENERGY

Projected total energy use by the project would be 175,000 Btu at-source per sq. ft. per year. The project would have an associated consumption of about 200,000 gallons of gasoline for project-generated vehicular traffic. Total project energy consumption would be equivalent to about 15,000 barrels of oil per year.

I. CONSTRUCTION NOISE

During excavation and exterior finishing noise levels in the 601 Montgomery building could reach as high as 65 dBA interfering with human speech and concentration, distracting employees and requiring raised voices to communicate.

VII. ALTERNATIVES TO THE PROPOSED PROJECT

The project sponsor, has considered, and is considering, a number of alternatives to the proposed project.

A. ALTERNATIVE ONE: CODE-CONFORMING ALTERNATIVE

This alternative would result in development of a combined office and condominium residential building on the project site. The alternative design would conform to the City Planning Code and Interim Controls and its approval by the City Planning Commission would not require a modification of the Code. Alternative One would be similar to the proposed project in height, bulk and design. The lobby, parking and office floors would be identical to the project as proposed. This alternative would include about 35 condominiums, five fewer than the proposed project. Residential units would be eliminated in the southeast corner of the building at the upper three stories to reduce the residential floor area to an amount consistent with identified bonus space.

This alternative would be about 300 ft. in height and contain a total of 24 stories. Alternative One would comply with the bulk and use provisions of the City Planning Code. The ground floor would contain retail use and separate lobbies for the residential and office portions of the building. A parking facility, accommodating about 60 vehicles, would be located on the second level plus mezzanine. Two freight loading spaces would be accessible via ramps from Merchant St. The building would contain 15 floors of office space and six floors of residential space. As in the proposed project, gross floor area of the commercial portion of the building would be approximately 243,600 sq. ft., representing an FAR of about 14:1.

Applicable bonuses, allowed under Section 126 of the City Planning Code, would be used for residential space as provided for under the Interim Controls. The project sponsor would request bonuses for multiple building entrances, sidewalk widening, shortened walking distances, a rooftop observation deck and

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parking access (see Table 1, p. 26). These bonuses would permit about 83,700 gross sq. ft. of additional floor area. About 83,300 gross sq. ft. of residential space would be provided under this alternative, representing an FAR of about 4.8:1. The gross floor area of the entire building would then be about 326,900 sq. ft., for an FAR of about 18.8:1, compared to 19.1:1 for the proposed project. This alternative would contain about 4,800 sq. ft. less residential floor area, and five fewer condominium units, than would the project.

The impacts of this alternative would generally be as described in the Environmental Impacts section of this report (see Section IV, pp. 46-111) for the proposed project. Alternative One would conform to the floor area and development bonus provisions of the City Planning Code and Interim Controls; the potential land use and growth-inducing impacts which would be expected to accompany modification of the City Planning Code under the proposed project would not occur. The cumulative impact of larger buildings which might be developed in the C-3 District due to a Code amendment which would allow the project's proposed residential area would not occur. Visually, Alternative One would be identical to the proposed project except that there would be less residential space in the southeast corner of the upper three stories; shadow patterns, wind effects and urban design impacts of this alternative would be as described for the project. By providing five fewer residential units than the project this alternative would satisfy less of the housing demand generated by the office portion of the building.

As with the proposed project, this alternative would result in demolition of the existing structures on the site and removal of the surface parking lot. Construction traffic, air quality and noise impacts would generally be similar to the proposed project. Energy consumption for the office portion of the building would be the same as with the project; the residential energy consumption would be about 10% less. Operational traffic impacts would be similar to the proposed project as the same number of on-site parking spaces are proposed.

Alternative One is under consideration by the project sponsor.

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B. ALTERNATIVE TWO: NO PROJECT ALTERNATIVE

This alternative, would entail no change to the site. The building at 643 Montgomery St., rated "C" in the study conducted for the Foundation for San Francisco's Architectural Heritage, and the second building on the site would be retained under this alternative. Because existing buildings on the site do not meet current seismic and safety standards, they could continue to pose life safety hazards to employees and other occupants under certain conditions, such as an earthquake.

In general, the environmental characteristics of this alternative would be substantially as described in the Environmental Setting section of this report (see Section III, pp. 30 - 45, for a discussion of existing conditions). Traffic, transit and air quality conditions (described in Section IV of this report) as 1984 base conditions with cumulative development, but without the project, would exist on streets around the site in 1984. The noise environment of the area would not change except for noise generated by increased cumulative traffic in the vicinity. There would be no change in the demand from the site for community services. The five businesses now operating on the site would not have to relocate.

This alternative would preserve options for future development of the site. It is not acceptable to the project sponsor because it would not provide additional office space and residential units to partially meet existing demand in San Francisco and because it would be an economic underuse of the site.

This alternative could result in the development of a high-rise building comparable to the project at another location. Development elsewhere in San Francisco would generally result in specific impacts as described for the project. Development at a location outside of San Francisco would probably involve an office building without on-site housing. The impacts of such a project would largely depend upon the location chosen and cannot now be accurately determined. Development of the project at a different location has

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been rejected by the project sponsor because of the firm's association with the City of San Francisco, existing interests in the site and the sponsor's conviction that the project site is a prime location for housing in the City.

C. ALTERNATIVE THREE: 14:1 COMMERCIAL SPACE ALTERNATIVE

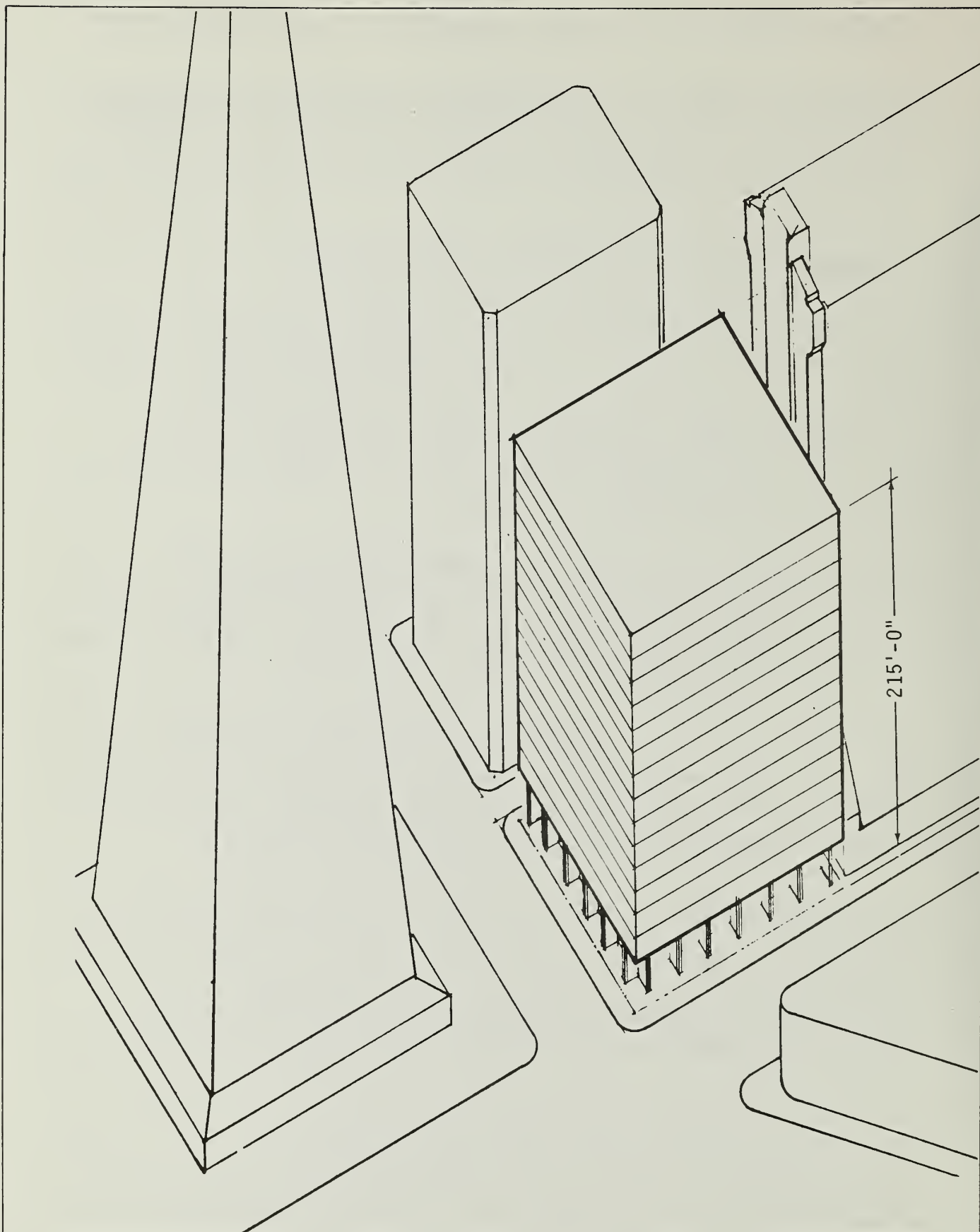
This alternative would consist of an office building, about 215 ft. in height, developed on the four parcels which comprise the proposed project site (see Figure 29). This alternative would contain approximately 243,600 gross sq. ft. of commercial space, representing an FAR of about 14:1, including ground-floor retail and lobby space and 14 floors of office space. There would be no residential development on the site.

A one-level parking garage would be provided, accommodating about 40 vehicles. The gross floor area of the parking garage would be about 17,000 sq. ft., about 7% of the gross floor area of the building. Loading space for two service vehicles would be accessible via Merchant St.

Under Alternative Three, the building would be generally rectangular in shape. There would be no upper level setbacks, as proposed for the project. The building would be about 85 ft. shorter than the maximum permitted height of 300 ft., and about 85 ft. shorter than the proposed project.

Land use effects would be similar to those of the proposed project except that Alternative Three would not satisfy any of the housing demand which would be generated by on-site office space. This alternative would not result in 24-hour activity on the site or in demand for resident-oriented retail services in the Financial District through the provision of residential space.

Urban design effects of this alternative would differ from the proposed project because of the decreased building height and absence of upper level setbacks; however, the building tower would be more visible than existing structures on the site. Pedestrian-level views from near the site would be similar to those of the project as proposed. The effect of this alternative



SOURCE: Kaplan/McLaughlin/Diaz

FIGURE 29: Alternative Three -
Commercial Space Alternative

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on long-range views of existing buildings in the site vicinity from the north and west, would be less than the proposed project because of the smaller building size. Shadow effects would be lessened in comparison to the project.

This alternative would result in demolition of the existing structures on the site and removal of the surface parking lot. Construction traffic, air quality and noise impacts would generally be similar to the proposed project. Energy consumption impacts would be similar to the proposed project for the office portion of the building. In total, this alternative would consume about 10% less energy than the project because residential use would not be included. Operational traffic impacts would be similar to the proposed project, but with no residential use there would be less off-peak travel in the site vicinity.

The project sponsor has rejected this alternative as not contributing housing to partially meet existing demand in San Francisco.

D. ALTERNATIVE FOUR: REDUCED SITE ALTERNATIVE

This alternative would develop the three parcels owned by the project sponsor. Lot 25, presently in City ownership, would remain vacant. Under this alternative, the site would be about 12,600 sq. ft. This alternative would develop a combined office and condominium residential building. Approximately 176,000 gross sq. ft. of office and commercial space would be provided, about 67,000 sq. ft. less than the proposed project, representing an FAR of about 14:1. Applicable bonuses, allowed under Section 126 of the City Planning Code, would be used for the provision of residential space. Allowable bonuses, for multiple building entrances, sidewalk widening, and shortened walking distances, would permit about 45,000 gross sq. ft. of additional residential space. Assuming an average unit size of about 1,200 sq. ft., about 38 residential units could be provided under this alternative, about two fewer than with the proposed project. These residential units would generally be smaller than those proposed for the project. The gross floor

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area of the building would then be about 219,000 sq. ft., about 66% of the proposed project, for an FAR of about 17.4:1, compared to 19.1:1 for the proposed project.

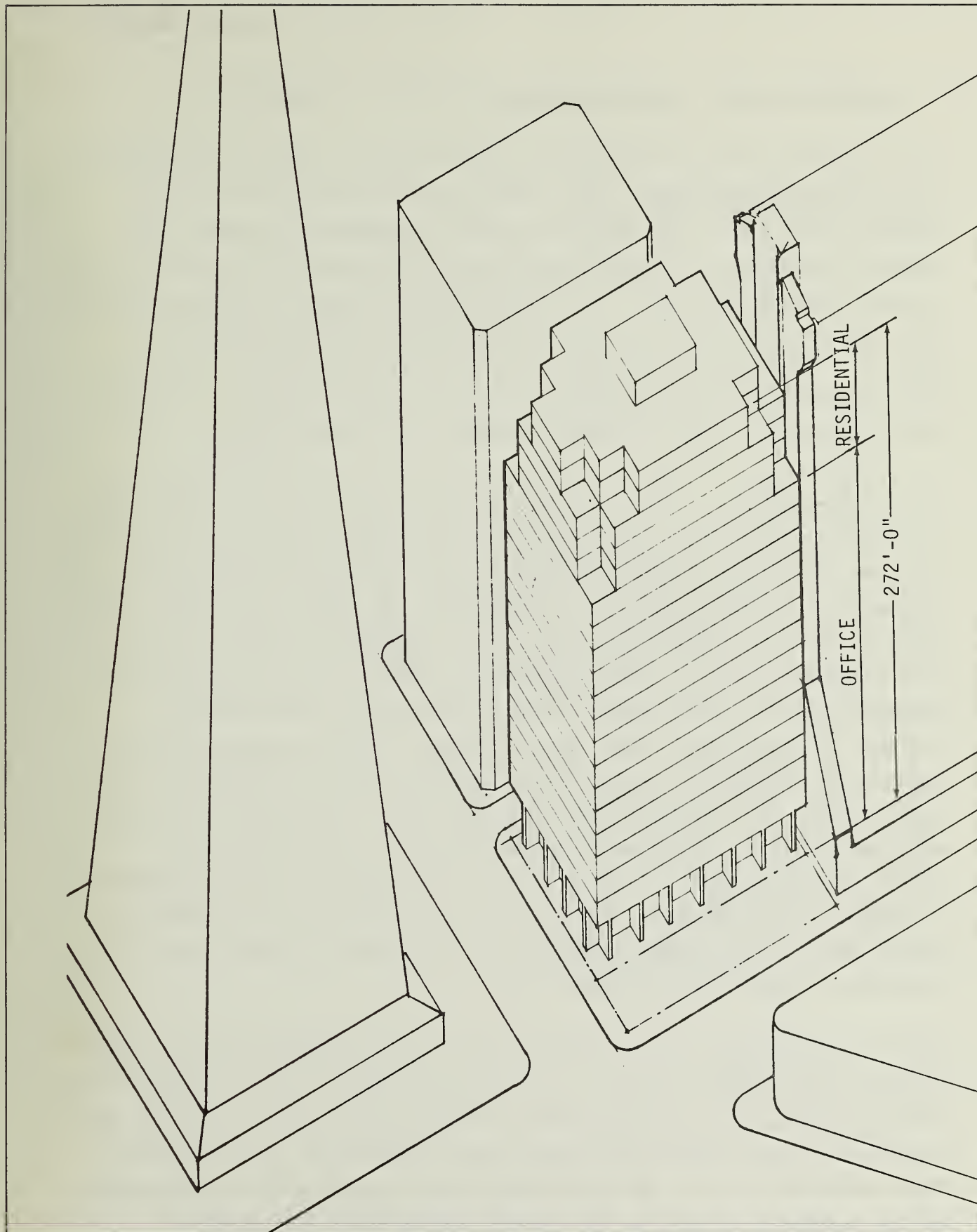
This alternative would be about 272 ft. in height (see Figure 30). The ground floor would contain retail use and separate lobbies for the residential and office portions of the building. A one-level parking facility would be provided. Parking ramps and loading spaces for service vehicles would be accessible via Merchant St. There would be 14 floors of office space and five floors of residential condominiums.

This alternative would comply with the general objectives of the San Francisco Comprehensive Plan and with the bulk and use provisions of the City Planning Code. The building height would be about 25 ft. below the maximum permitted and about 25 ft. less than the proposed project.

The office portion of the building would generally be rectangular in shape with sculptured setbacks at the residential levels. This alternative would result in an open-ended project block as Lot 25 would remain vacant unless subsequently developed. The building tower would be more visible than the existing structures on the site. The effect of this alternative on views of existing buildings in the site vicinity, from long-range viewpoints to the north and west, would be less than the proposed project because of the smaller building size. Shadow effects on the surrounding area would be reduced in comparison to the proposed project.

This alternative would result in demolition of the existing structures on the site and removal of the surface parking lot. Construction traffic, air quality and noise impacts would generally be similar to the proposed project. Energy consumption impacts would be similar to the proposed project for the residential portion of the building; the office portion of the building would consume about 25% less energy than the project. Operational traffic impacts would be reduced from those of the proposed project about 25%, roughly in proportion to the reduced floor area and number of parking spaces.

Alternative Four is under consideration by the project sponsor.



SOURCE: Kaplan/McLaughlin/Diaz

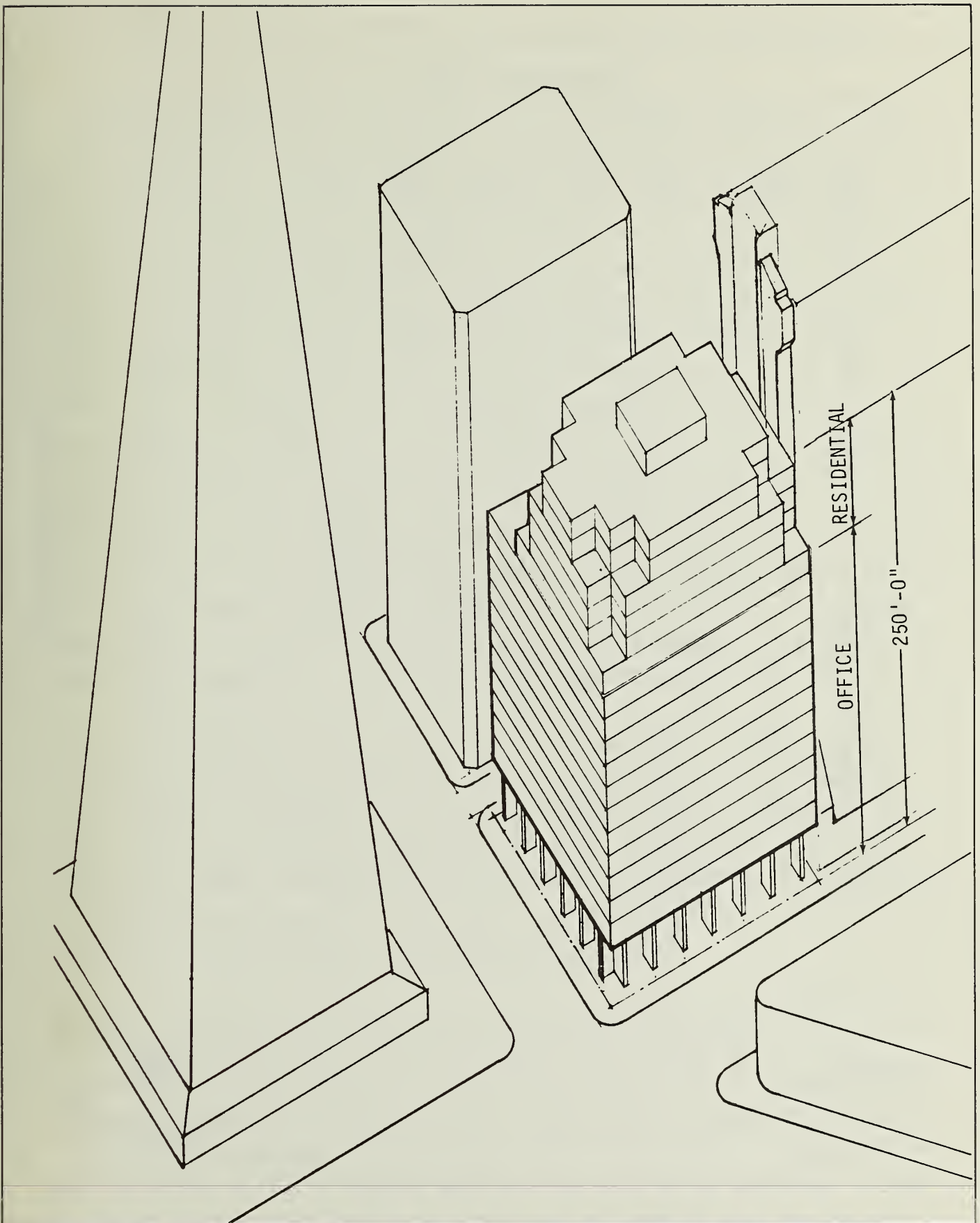
FIGURE 30: Alternative Four –
Reduced Site Alternative

D. ALTERNATIVE FIVE: GUIDING DOWNTOWN DEVELOPMENT ALTERNATIVE

This alternative would be designed to comply with the guidelines contained in Guiding Downtown Development (GDD), published by the Department of City Planning in May 1981. GDD contains a series of regulatory proposals for managing development in downtown San Francisco affecting size, design, use and location of major buildings. The report proposes changes in the City Planning Code regulations for the C-3 Planning Code Use Districts pertaining to housing, transportation, open-space, and historic preservation. Table 15, p.138, compares existing development controls contained in the City Planning Code to proposed changes in those requirements contained in GDD.

This alternative would develop all four parcels comprising the project site. The 250-ft. high structure would contain about 208,800 gross sq. ft. of office and commercial space, about 34,800 sq. ft. less than the proposed project, and representing an FAR of about 12:1. Residential use would occupy about 35,000 gross sq. ft. for an additional FAR of 2:1. Assuming an average unit size of about 1,200 gross sq. ft. (approximately the same size as the smallest unit proposed as part of the project), about 29 residential units could be provided, or about eleven fewer than the number of units proposed with the project; the average unit size would be smaller under this alternative. The overall FAR of this structure would be about 14:1. The maximum FAR allowed under the provisions contained in GDD would be 17:1, including 5:1 for housing, but the height limit of 250 ft. would not permit the development of the maximum FAR of the site. The building, containing a total of about 243,800 gross sq. ft., about 87,900 sq. ft. less than the project, would be about 250 ft. in height (see Figure 31).

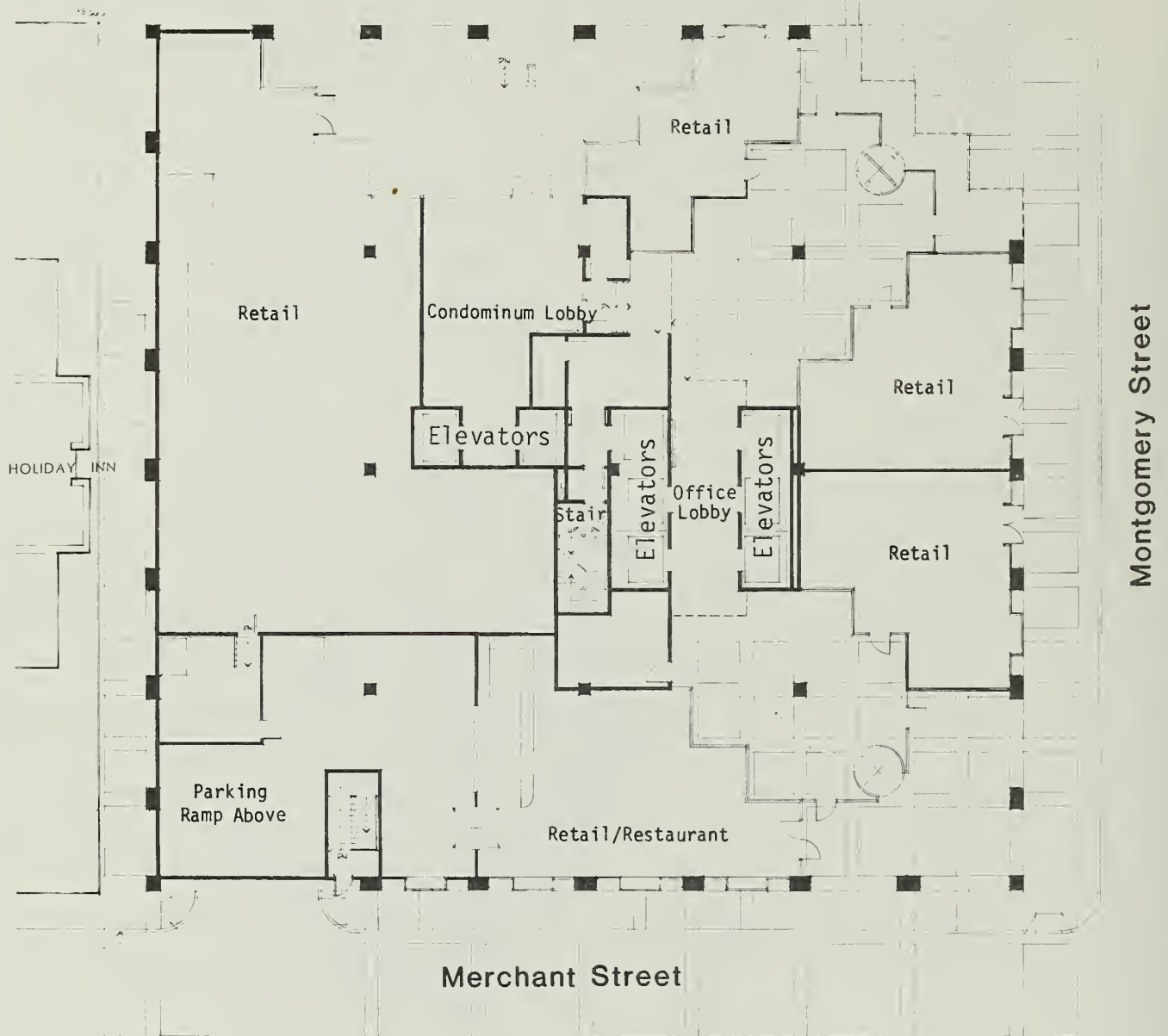
Under this alternative the ground-floor plan would be different than for the proposed project (see Figure 32, p.136). The ground-floor would contain about 10,000 gross sq. ft. of lobby and retail space, about 3,000 sq. ft. more than the project; there would be five ground-level retail uses, each containing fewer than 2,000 sq. ft. The second floor would contain eight parking spaces for the residents, as well as two freight loading docks and mechanical equipment. There would then be 13 floors of office space and three floors of residential condominiums, a total of 18 stories.



SOURCE: Kaplan/McLaughlin/Diaz

FIGURE 31: Alternative Five -
Guiding Downtown Development Alternative

Washington Street



Montgomery Street

Merchant Street

LEGEND

■ Columns



SOURCE: Kaplan/McLaughlin/Diaz

FIGURE 32: Alternate Ground Floor Plan

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The site is located in the 250-S Height District proposed in GDD, requiring that the average floor area above 65 ft. not exceed 20,000 sq. ft., and that the average sq. ft. of floor area above the midpoint of the height of the building be 2/15ths less than the average sq. ft. of floor area below the midpoint. This alternative would comply with the provisions for transfer of bulk from the upper to lower stories of the structure by sculptured upper-level setbacks similar to the proposed project. This alternative would provide the maximum amount of commercial space permitted in GDD and would equal the maximum height of 250 ft. in this proposed Height District. To comply with the GDD height and transfer of bulk provisions, the amount of housing would be reduced from the maximum allowable FAR of 5:1. No increase in height for residential uses would be permitted by GDD in 250-ft. height districts. If a height bonus of 50 ft. were provided to facilitate development of housing, as permitted in GDD for other proposed height districts, this alternative could contain about 40 more 1,200-sq. ft. units. A 50 ft. bonus would increase the height on the site to 300 ft., the existing height limit for the site. Such an alternative would appear similar to the project, but would have a reduced amount of commercial space.

This alternative would incorporate art work into the public entrance areas of the building. The proposed art requirement in GDD specifies that investment in art be equal to at least 1% of total construction costs. The proposed open space requirement of about 9,800 sq. ft. could not be met on-site, due to the provision of retail areas on the ground floor and open space for the residents at the upper-level setbacks. The required open space would have to be provided off-site at another location in a C-3-0 district.

The GDD guidelines specify that housing be provided at the rate of 640 sq. ft. of housing per 1000 sq. ft. of office space. Using this formula, approximately 124,000 gross sq. ft. of residential space would be required; this would represent a FAR of about 7.1:1. This amount of residential space could not be accommodated on the site under the FAR limitations recommended in GDD. If 35,000 sq. ft. of housing were provided on-site, an additional 89,000 sq. ft. of housing would have to be constructed off-site to meet the proposed housing requirement.

TABLE 15: COMPARISON OF EXISTING DEVELOPMENT CONTROLS TO PROPOSED CHANGES CONTAINED IN GUIDING DOWNTOWN DEVELOPMENT, MAY 1981

Major Development Controls Pertaining to Project Site	Present Requirements- City Planning Code and Interim Controls	Proposed Requirements- Guiding Downtown Development	Proposed Project
BASE FAR	14:1	12:1*	14:1 commercial plus 5:1 residential
Height Limit	300 ft.	250 ft.	300 ft.
Average Area per Floor	28,788 sq. ft.	20,000 sq. ft. above 65 ft.	16,000 sq. ft. above 65 ft. (office floors)
Maximum Diagonal Length	200 ft. above 150 ft. in height	200 ft. at top portion of building	180 ft. above 150 ft. in height
Size of Upper Floors	Not specified	Average floor area of floors above midpoint of building height to be 2/15 (13%) less than average floor area of floors below midpoint.	Average floor area of residential floors 26% less than average floor area of office
Incorporation of Art	Not required	Art equal to 1% of total construction cost.	Art proposed for ground floor; cost not determined
Ground-floor retail	Not required	2,000 maximum sq. ft. per use to obtain floor area bonus	4,000 sq. ft. proposed to accommodate about four tenants
Recreation/Open space	Not required	1 sq. ft. for public use per 25 sq. ft. of gross floor area (about 7,000 sq. ft. at an FAR of 12:1).	17,500 sq. ft. of common and private open space for use by project residents
Off-street loading	2 spaces for buildings containing between 200,001 and 500,000 sq. ft. of floor area	0.1 spaces per 10,000 sq. ft. of gross floor area for buildings containing more than 100,000 ft. (two spaces for the site).	2 spaces provided, as required by the City Planning Code
Long-term Parking	Not specified	None permitted for office uses	Long-term parking only for residential use
Provision of a Transportation Broker	None required	Proposed Requirement	Transportation broker would be provided
Provision of Housing	None required	640 sq.ft. per 1,000 sq. ft. of office space (about 188 units for the site); Maximum FAR equal to 5:1 on-site	40 on-site condominiums proposed for an FAR of 5:1

* Additional FAR allowable for provision of housing (5:1); retention of or transferring development rights from significant architectural buildings (3:1); and for the provision of retail uses containing 2,000 sq. ft. or less per use (0.5:1). The maximum FAR, including allowable bonuses, is 17:1.

SOURCE: City Planning Code; and Guiding Downtown Development, May 1981.

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This alternative would comply with the general objectives of the San Francisco Comprehensive Plan and with the use provisions of the City Planning Code. The building tower would be more visible than the existing structures on the site. The effect of this alternative on views of existing buildings in the site vicinity, from long-range viewpoints to the north and west, would be less than the proposed project because of the reduced height. Shadow effects would also be reduced under this alternative, due to the decreased building height.

In comparison to the project, winds on Montgomery St. would be reduced by about 35% and those north and northeast of the building would be reduced by 28% under west winds. There would be increased street level turbulence at the intersections of Merchant and Clay Sts. with Montgomery St. Westerly winds north of the building would be about 5% greater than for the project, but the recirculation zone which would result from the project would not occur with Alternative Five. The vertical vortices which occur east of the Transamerica Pyramid under existing conditions, and which would occur with the project, would be eliminated with this alternative.

This alternative would result in demolition of the existing structures on the site and removal of the surface parking lot. Construction traffic, noise and air quality effects would be similar to the proposed project. Operational traffic impacts would be less than those of the proposed project due to the smaller size of the office portion of the building. Energy consumption for the office and residential space would be about 10% less than for the project.

The project sponsor has rejected this alternative as not providing the amount of office space permitted under the City Planning Code and proposed for the project. In addition, the project sponsor considers the 250 ft. height limit recommended in Guiding Downtown Development an unnecessary limitation on the development potential of the site.

VIII. EIR Authors and Consultants

VIII. EIR AUTHORS AND CONSULTANTS; ORGANIZATIONS AND PERSONS CONSULTED

EIR AUTHORS

San Francisco Department of City Planning
45 Hyde Street
San Francisco, CA 94102
Environmental Review Officer: Alec Bash
Assistant Environmental Review Officer: Barbara Sahm
Project Coordinator: Carol Roos

EIR CONSULTANTS

Environmental Science Associates, Inc.
1390 Market Street, Suite 215
San Francisco, CA 94102

(Prime Consultant: Project Description, Land Use, Urban Design, Historical and Cultural, Employment, Housing and Fiscal Factors, Air Quality, Noise, Energy, Community Services and Utilities, Geology, Seismology and Hydrology, Significant Environmental Effects, Mitigation Measures, and Alternatives to the Proposed Project.)

Nancy Cunningham Clark: Associate-in-Charge
Marc Zeppetello: Project Manager

TJKM, Traffic Consultants
(Consulting Traffic Engineer)
675 Ygnacio Valley Road, Suite 211
Walnut Creek, CA 94596
C. Kinzel, Traffic Engineer
Lic. #0023
F. Dock, EIT 39398

University of California, Davis
(Micro-Climate Studies)
2053 Bainer Hall
Davis, CA
B. White, Professor

Bendix Environmental Research, Inc.
(EIR Consultant)
1390 Market St., Suite 902
San Francisco, CA 94102
Selina Bendix, Ph.D.

PROJECT SPONSOR

Crow-Spieker Company, doing business as Trammell Crow Company
601 Montgomery Street, Suite 410
San Francisco, CA 94111

PROJECT ARCHITECTS AND ENGINEERS

Kaplan/McLaughlin/Diaz
Architects/Planners
222 Vallejo Street
San Francisco, CA 94111
J. Heller
K. Cox

Yoshpe Engineers
1917 22nd Street
Sacramento, CA 95816
D. Yoshpe, Mechanical Engineer
Lic. # 11102
R. Woods

CITY AND COUNTY OF SAN FRANCISCO

Department of City Planning
100 Larkin Street
San Francisco, CA 94102
Gail Bloom
Jonathan Malone
Lois Scott
Eva Levine

S.F. Clean Water Program
150 Hayes Street
San Francisco, CA 94101

Division of Sewer System Design
Don Hyashi, Director Citizens Participation
Nathan Lee, Eng. Associate II

Fire Department
Support Services
260 Golden Gate Avenue
San Francisco, CA 94102
Joseph Sullivan, Chief
Robert Rose, Chief

Police Department
Southern Station
850 Bryant Street
San Francisco, CA 94103
James Farrell, Sergeant
Division of Planning & Research

Water Department
City Distribution Division
1990 Newcomb Avenue
San Francisco, CA 94124
Harlow Swain, Senior District
Water Serviceman

OTHER ORGANIZATIONS

Pacific Gas and Electric Company
245 Market Street
San Francisco, CA 94106
Alfred R. Williams, Industrial
Power Engineer

IX. DISTRIBUTION LIST

REGIONAL AGENCIES

Alameda-Contra Costa County
Transit District
508 - 16th Street
Oakland, CA 94612
Attention: Don Larson

Association of Bay Area
Governments
Hotel Claremont
Berkeley, California 94705
Attention: Charles Q. Forrester

Bay Area Air Quality
Management District
939 Ellis Street
San Francisco, California 94109
Attention: Irwin Mussen

Bay Area Rapid Transit
District
800 Madison Street
Oakland, California 94607
Attention: Barbara Neustadter

Golden Gate Bridge Highway
& Transportation District
P.O. Box 9000, Presidio Station
San Francisco, California 94129
Attention: Dale W. Luehring

Metropolitan Transportation
Commission
Hotel Claremont
Berkeley, California 94705
Attention: Franceen Lyons

San Mateo County Transit
District
400 South El Camino
San Mateo, California 94402

Regional Water Quality Control
Board
San Francisco Region
1111 Jackson Street, Room 6040
Oakland, CA 94607
Attention: Adam Olivera

CITY AND COUNTY OF SAN FRANCISCO

San Francisco Planning Commission
Department of City Planning
City and County of San Francisco
100 Larkin Street
San Francisco, California 94102
Attention: Commissioners:
Toby Rosenblatt, President,
Susan Bierman,
Roger Boas,
Norman Karasick, Alternate for
Richard Sklar
Eugene Kelleher, Alternate for
Roger Boas,
Jerome Klein,
Yoshio Nakashima,
C. MacKey Salazar,
Richard Sklar,
Lee Woods, Commission Secretary

San Francisco Department of
Public Works
City Hall, Room 260
San Francisco, CA 94102
Attention: Jeffrey Lee

San Francisco Department of
Public Works
Traffic Engineering Division
460 McAllister Street
San Francisco, California 94102
Attention: Scott Shoaf

San Francisco Department of
Public Works
Mechanical Section
45 Hyde Street, Room 222
San Francisco, CA 94102
Attention: Ray Danehy

San Francisco Fire Department
260 Golden Gate Avenue
San Francisco, California 94102
Attention: Joseph Sullivan,
Chief, Division of Planning
and Research

San Francisco Municipal Railway
MUNI Planning Division
949 Presidio Avenue, Room 204
San Francisco, CA 94115
Attention: Susan Chelone

San Francisco Committee for
Utility Liaison on Construction
and Other Projects (CULCOP)
c/o GES - Utility Liaison
City Hall, Room 363
San Francisco, CA 94102
Attention: Herman Beneke

San Francisco Landmarks Preservation
Advisory Board
100 Larkin Street
San Francisco, CA 94102
Attention: Jonathan H. Malone

Mayor's Economic Development Council
552 McAllister Street
San Francisco, CA 94102
Attention: Richard Goblirsch

San Francisco Police Department
850 Bryant Street
San Francisco, California 94103
Attention: Sgt. Paul Libert,
Planning and Research Division

San Francisco Real Estate Department
450 McAllister Street, Room 600
San Francisco, California 94102
Attention: Wallace Wortman,
Director of Property

San Francisco Unified School District
135 Van Ness Avenue, Room 209
San Francisco, CA 94102
Attention: Dr. Robert Alioto

San Francisco Water Department
Distribution Division
425 Mason Street
San Francisco, California 94102
Attention: John Kenck, Manager

GROUPS & INDIVIDUALS

Asian, Inc.
1610 Bush Street
San Francisco, California 94109
Attention: Harold Yee

Asian Americans for Equality
759 Jackson Street
San Francisco, CA 94133

Asian Community Center
19 Brenham Place
San Francisco, CA 94108

Asian Law Caucus Inc.
36 Waverly Place, Suite 2
San Francisco, California 94108
Attention: Edwin M. Lee

Asian Neighborhood Design
576 Vallejo Street
San Francisco, CA 94133
Attention: Gilbert Chan

Bay Area Council, Inc.
348 World Trade Center
San Francisco, CA 94111

Chinatown Coalition for Better Housing
615 Grant Avenue
San Francisco, California 94108
Attention: Jennie Lew

Chinatown Neighborhood Center, Inc.
c/o 615 Grant Avenue, 2nd Floor
San Francisco, CA 94108

Chinatown Neighborhood Improvement
Resource Center
615 Grant Avenue, 2nd Floor
San Francisco, California 94108
Attention: Gordon Chin

Chinatown Transportation Research
and Improvement Program
615 Grant Avenue, 2nd Floor
San Francisco, CA 94108

Chinese for Affirmative Action
121 Waverly Place
San Francisco, California 94108
Attention: Henry Der

Chinese American Citizen's Alliance
1044 Stockton Street
San Francisco, CA 94105

Chinese American Institute
of Engineers
146 Waverly Place
San Francisco, CA 94108

Chinese Chamber of Commerce
730 Sacramento Street
San Francisco, CA 94108
Attention: George Chinn

Chinese Community Housing Corp.
615 Grant Avenue, Second Floor
San Francisco, CA 94018
Attention: Tim Dean

Chinese Consolidated Benevolent
Association
843 Stockton Street
San Francisco, CA 94108

Chinese Democratic Club
915A Grant Avenue
San Francisco, CA 94108

Chinese Newcomers Service Center
816 Sacramento Street
San Francisco, CA 94108

Committee for Better Parks and
Recreation Facilities of Chinatown
920 Sacramento Street
San Francisco, California 94108
Attention: Beverly Karnatz

Downtown Association
582 Market Street
San Francisco, CA 94194
Attention: Lloyd Pflueger

Environmental Impact Planning
319 Eleventh St.
San Francisco, CA. 94134

Friends of the Earth
124 Spear Street
San Francisco, California 94105
Attention: Connie Parrish

The Foundation for San Francisco's
Architectural Heritage
2007 Franklin Street
San Francisco, California 94109
Attention: Grant Dehart,
Executive Director

Gruen and Gruen
564 Howard St.
San Francisco, CA. 94105

Sue Hestor
4536 - 20th Street
San Francisco, California 94114

IBI Group
359 San Miguel Drive, Suite 200
Newport Beach, California 92660
Attention: Phil Beinhaker,
Paul Zejfin

Kaplan/McLaughlin/Diaz
222 Vallejo Street
San Francisco, California 94111
Attention: Jeffrey Heller

Chris Laudiotis
1919 28th Ave.
San Francisco, CA. 94116

Robert Meyers
5826 Balboa Drive
Oakland, CA 94611

Jerry Owyang
1517 Reed Ave., #2
San Diego, CA. 92109

Mrs. G. Bland Platt
339 Walnut St.
San Francisco, CA. 94118

RIDES, Inc.
100 Van Ness Avenue, 19th Floor
San Francisco, CA 94102
Attention: Charna Staten

San Francisco Beautiful
41 Sutter Street
San Francisco, California 94104
Attention: H. Klussman,
President

San Francisco Building and
Construction Trades Council
400 Alabama Street, Room 100
San Francisco, California 94110
Attention: Stanley Smith

San Francisco Chamber of
Commerce
465 California Street
San Francisco, California 94104
Attention: Richard Morten

San Francisco Labor Council
3068 - 16th Street
San Francisco, California 94103
Attention: Bernard Speckman

San Francisco Planning and Urban
Research Association
312 Sutter Street
San Francisco, California 94108
Attention: John Jacobs

San Franciscans for Reasonable
Growth
473 Eleventh Ave.
San Francisco, California 94118
Attention: Tony Kilroy

San Francisco Forward
690 Market St.
San Francisco, Ca. 94104
Attention: Frank Nato

San Francisco Tomorrow
728 Montgomery Street, Room 34
San Francisco, California 94111
Attention: Suzanne Smith

Martin Sawa
Arthur Rubloff & Co.
1 Maritime Plaza, Suite 1025
San Francisco, California 94111

Sierra Club
530 Bush Street
San Francisco, California 94105
Attention: Becky Evans

Kent E. Soule
1180 Filbert, #204
San Francisco, California 94109

Telegraph Hill Dwellers Association
426 Vallejo Street
San Francisco, California 94133
Attention: Jim Augustino

Telegraph Hill Neighborhood Association
660 Lombard Street
San Francisco, California 94133
Attention: Peter Gibb

Tenant & Owners Development
Corporation
177 Jessie Street
San Francisco, California 94105
Attention: John Elberling

Paul Thayer
1033 Stanyan
San Francisco, CA 94117

Tim Tosta
333 Market Street, Suite 2230
San Francisco, CA 94105

Steven Weicker
899 Pine Street, #1610
San Francisco, CA 94108

ABUTTING PROPERTY OWNERS

Crow-Spieker-Cahill
2180 Sand Hill Road
Menlo Park, California 94025
Attention: Warren E. Spieker, Jr.

Crow-Spieker Companies
601 Montgomery Street, Suite 410
San Francisco, California 94111
Attention: Patrick J. Gilligan

Four Seas Investment Corp.
340 Stockton Street
San Francisco, California 94108
Attention: Jack Wong

Holiday Inn
750 Kearny Street
San Francisco, California 94108
Attention: Yue, Building Manager

Justice Enterprises, Inc.
1 Embarcadero Center
San Francisco, CA 94111

Doro's Restaurant
c/o Milton Meyer & Co.
1 California Street
San Francisco, California 94111

Transamerica Title Insurance Co.
Premier Insurance Co.
600 Montgomery Street
San Francisco, California 94111
Attention: John Hall

Transamerica Corporation
Orrick, Herrington and Sutcliffe
600 Montgomery Street, 10th Floor
San Francisco, CA 94111
Attention: David Spielberg

NEWS MEDIA

San Francisco Bay Guardian
2700 19th Street
San Francisco, CA 94110
Attention: David Johnston

San Francisco Chronicle
925 Mission Street
San Francisco, CA 94103
Attention: Marshall Kilduff,
Allen Temko

San Francisco Examiner
110 Fifth Street
San Francisco, CA 94103
Attention: Gerald Adams

San Francisco Progress
851 Howard Street
San Francisco, CA 94103
Attention: Mike Mewhinney

LIBRARIES

Environmental Protection Agency Library
215 Fremont Street
San Francisco, CA 94105
Attention: Jean Circiello

Hastings College of the Law Library
198 McAllister Street
San Francisco, CA 94102

Golden Gate University Library
536 Mission Street
San Francisco, CA 94105

San Francisco Public Library
Main Branch, Documents Section
208 Larkin Street
San Francisco, CA 94102

San Francisco Public Library
Business Branch
530 Kearny Street
San Francisco, CA 94104

San Francisco State Library
Government Publications
San Francisco State University
1600 Holloway Avenue
San Francisco, CA 94132

Stanford University Library
Government Documents Section
Stanford, CA 94305

University of San Francisco
Gleeson Library
Golden Gate and Parker Avenues
San Francisco, CA 94115

X. APPENDICES

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APPENDIX A: FINAL INTIIAL STUDY*

MONTGOMERY - WASHINGTON BUILDING

SAN FRANCISCO

81.104E

September 1981

* Differences among data presented in the following Initial Study and the preceding Focused EIR are attributable to the availability of additional and more precise data during the subsequent preparation of the EIR.



DEPARTMENT OF CITY PLANNING

100 LARKIN STREET · SAN FRANCISCO, CALIFORNIA 94102
(415) 552-1134

NOTICE THAT AN ENVIRONMENTAL IMPACT REPORT IS DETERMINED TO BE REQUIRED

Date of this Notice: September 18, 1981

Lead Agency: City and County of San Francisco, Department of City Planning
100 Larkin Street, San Francisco, CA. 94102

Agency Contact Person: Carol Roos

Tel: (415) 552-1134

Project Title: 81.104E:
Montgomery-Washington Building

Project Sponsor: Crow-Spieker Companies

Project Contact Person: Patrick Gilligan

Project Address: Southwest corner of Washington and Montgomery Streets

Assessor's Block(s) and Lot(s): Assessor's Block 208, Lots 2-4 and 25

City and County: San Francisco

Project Description: Construction of a 24-story combined office and residential condominium building with street level commercial use and 57-car garage, after demolition of a one-story building and a two-story building.

THIS PROJECT MAY HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT AND AN ENVIRONMENTAL IMPACT REPORT IS REQUIRED. This determination is based upon the criteria of the Guidelines of the State Secretary for Resources, Sections 15081 (Determining Significant Effect), 15082 (Mandatory Findings of Significance) and 15084 (Decision to Prepare an EIR), and the following reasons, as documented in the Initial Evaluation (initial study) for the project, which is on file at the Department of City Planning:

Please see the attached Initial Study.

Deadline for Filing of an Appeal of this Determination to the City Planning Commission: September 28, 1981.

An appeal requires 1) a letter specifying the grounds for the appeal, and 2) a \$35.00 filing fee.


Alec S. Bash, Environmental Review Officer

MONTGOMERY-WASHINGTON
BUILDING
INITIAL STUDY
81.104E

PROJECT DESCRIPTION

The project would be a 24-story combined office and residential condominium building proposed for development on the block bounded by Washington, Montgomery, Clay and Kearny Sts. The 17,400 sq.-ft. site encompasses four separate parcels on the northeast corner of Assessor's Block 208. Merchant St., a one-block-long service street, bisects the block in an east-west direction.

The site is in a C-3-0 (Downtown Office) District and a 300-H height and bulk district. The allowable Basic Floor Area Ratio (FAR) for the site is 14:1.

The site is currently in commercial use, with the exception of one vacant parcel. The parcel, Lot 25 at the corner of Washington and Montgomery Sts., is in City ownership. This lot was originally six separate lots, which were acquired by the City's Department of Public Works (DPW) in four separate transactions from June 1970 to February 1973. Portions of the land were used to widen Washington St.; the remainder was subsequently declared to be surplus by DPW. The project sponsor proposes to bid on and purchase Lot 25 at public auction in 1981. The adjacent Lots 2 and 3 contain two- and one-story brick structures, respectively, including approximately 4,900 gross sq. ft. of restaurant space and 3,000 gross sq. ft. of office space. These buildings would be demolished. The parcel at the corner of Montgomery and Merchant Sts. (Lot 4) contains a surface parking lot with about 45 spaces.

The proposed project would be a 300-ft. high, 24-story mixed-use building. Development would be in the following mix: about 7,000 gross sq. ft. of ground-floor lobby and retail space; 1 double-height level of parking with mezzanine, above the lobby level and accessible from Merchant St. (about 25,000 gross sq. ft. containing approximately 62 parking spaces and about 3,300 gross sq. ft. containing two truck loading docks); about 236,600 gross sq. ft. of office space in 15 stories; about 77,500 gross sq. ft. of

market-rate condominium residential space in six stories (approximately 40 units); a recreation facility for residents (about 4,000 sq. ft.); and about 8,000 sq. ft. of mechanical/building-service space on two levels, consisting of a structural basement (cellular foundation) and a mechanical service area, on the floor between the office and residential space; there would also be a rooftop mechanical penthouse. The project would include about 17,500 gross sq. ft. of open space in the following mix: about 10,000 sq. ft. of rooftop common open space; about 4,400 sq. ft. of private open space consisting of balconies and decks for the residential units; and about 3,100 sq. ft. in a pool area located at the first residential level.

TABLE 1: Existing Uses at the Project Site: Assessor's Block 208, Lots 2,3,4 and 25.

<u>Lot No.</u>	<u>Land Area in Sq. Ft.</u>	<u>Current Use</u>	<u>Tenant</u>	<u>Owner</u>
2	3,320	Commercial: restaurant/ offices	-Lafayette Restaurant -F.O.Merwin, Architect -Therese Weedy, Photographer	Project Sponsor Project Sponsor
3	1,920	Commercial: restaurant	-Iron Pot Restaurant	Project Sponsor
4	7,340	Commercial: surface valet parking lot	-Montgomery Parking	Project Sponsor
25	<u>4,820</u>	vacant	none	C.C.S.F.*
Total	17,400			

*City and County of San Francisco

SOURCE:

Development of retail, restaurant, and office floors would be at a 14:1 floor area ratio (FAR), excluding residential uses. The building would be about the same height as the Holiday Inn on the West.

The project would include widened sidewalks, three major building entrances, a street-level pedestrian arcade to facilitate shortened walking distances, and a tower of sculptured form. The building would be setback at the Montgomery/Washington corner, to preserve views from upper Columbus Ave. and respond to the configuration of the Transamerica building. The building setbacks at this corner would extend the entire height of the project and would increase, in a stepped manner, at the upper levels. The faceted upper-floor setbacks, diagonally terracing the northeast corner of the building, were designed to reduce the apparent bulk and scale of the building as seen from the Jackson Square Historic District and Telegraph Hill. The total gross floor area of the building would be approximately 329,800 sq. ft., an FAR of 19:1 and exceed the Basic FAR by about 5:1, or approximately 86,200 sq. ft. (excluding cellular foundation, mechanical and parking floor area).

The project sponsor is Crow-Spieker Companies of San Francisco, doing business as Trammell Crow Company. Project architects are Kaplan/McLaughlin/Diaz of San Francisco, and the IBI Group of Newport Beach, CA.

POTENTIAL ENVIRONMENTAL EFFECTS

Potential environmental issues associated with project implementation include: transportation, particularly circulation in relation to Chinatown and the Financial District, and transit effects; urban design, the project in relation to adjacent and nearby high-rise buildings, the smaller-scale Jackson Square Historic District and the Telegraph Hill community, including views; traffic-generated air quality effects; shadow and wind effects; energy consumption; and construction noise.

These issues require analysis in subsequent environmental documentation for the project.

Potential environmental issues associated with the project that have been determined in this Initial Study to be insignificant, and, therefore, not to be addressed in subsequent environmental documentation for the project, are described below, and discussed later in this Initial Study.

Land Use Compatibility: The project would be consistent with existing and proposed land uses in the vicinity of the site. The project would comply with the height provisions of the City Planning Code, but would exceed the height recommendations for the site contained in the Department of City Planning document, Guiding Downtown Development.

Noise: After completion, the project would not increase audible noise levels in the project vicinity.

Public Services and Utilities: The demand for public services and utilities would not require additional personnel or equipment, with the exception of fire protection services in the case of a major fire or disaster.

Biology: The project would not directly affect plants or animals, as the site is urbanized. Three of the four lots are covered with buildings or pavement. Lot 25 was covered with structures which were demolished to make way for a street widening. The site is now covered with grass and weeds.

Land/Geology/Soils: The site is on bedrock and the project would not require substantial excavation, grading or dewatering. The average depth of excavation would be about 20 ft. Dewatering would be required only during the construction period. Pile driving would not be required as a mat (cellular) foundation would be used.

Cultural/Historic: No known cultural resources or structures designated to be of architectural or historic importance would be affected by project implementation. See p. 29 for a mitigation measure in case archaeological resources are found during project excavation. The project would result in the removal of the two existing buildings on the site. The building at 643 Montgomery St. was rated in the architectural survey conducted for the Foundation for San Francisco's Architectural Heritage. It is not, however, included in the City's official list of Architecturally and/or Historically Significant Buildings in the Downtown. The building at 639 Montgomery St. was not rated in either architectural survey.

Construction-related Air Quality: Construction activities would not increase the frequency of violations of air quality standards as monitored by the Bay Area Air Quality Management District (BAAQMD) at Van Ness Ave. and Ellis St.,

about one-and-a-quarter miles southwest of the site. See p. 26 for measures which would reduce temporary particulate emissions during construction.

Hazards: Project operation would not increase the risk of explosion or release of hazardous substances, in the event of an accident, or cause other dangers to public health and safety.

Water Quality: Project operation would not affect the quality or quantity of public water or groundwater in the project vicinity. Shallow dewatering would be required during project construction.

A. GENERAL CONSIDERATIONS:	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
1. Would the project conflict with objectives and policies in the Comprehensive Plan (Master Plan) of the City? (Please see discussion below.)	_____	<u>X</u>	_____	_____	<u>X</u>
2. Would the project require a variance, or other special authorization under the City Planning Code?	<u>X</u>	_____	_____	_____	<u>X</u>
3. Would the project require approval of permits from City Departments other than DCP or BBI, or from Regional, State or Federal agencies?	_____	_____	<u>X</u>	_____	_____
4. Would the project conflict with adopted environmental plans and goals?	_____	_____	<u>X</u>	_____	_____

The project would provide new housing and commercial office space in the Downtown core of San Francisco on a site that is close to local and regional transit facilities. It would comply with Objective 6 of the Commerce and Industry Element of the Comprehensive Plan to support San Francisco as "a prime location for financial, administrative, corporate, and professional activity", and would comply with policies of the Commerce and Industry Element to "maintain a compact downtown core" and to "provide adequate amenities for those who live, work and use Downtown". The project would comply with the Residence Element of the Comprehensive Plan which recommends "multiple-residential development in conjunction with commercial uses in the Downtown commercial area." Additionally, the project would comply with

recently proposed Department of City Planning (DCP) policies which recommend that new office buildings also provide housing (outlined in the DCP study document entitled Guiding Downtown Development, May 1981). The San Francisco Sub-Division Code requires provision of 10% low and moderate income housing in projects which would contain more than 50 dwelling units, provided subsidies are available. The project would provide about 40 condominiums and would not include any low and moderate housing.

The sculptured stepped and set back design of the project's upper northeast- and southwest-facing facades attempts to comply with the Urban Design Element of the Comprehensive Plan by providing a height and bulk transition from the nearby 52-story (778 ft.) Bank of America building at California and Montgomery Sts., the 48-story (853-ft.) Transamerica building, directly east of the site across Montgomery St., and the smaller-scale 2- to 8-story structures which characterize the Jackson Square Historic District, north and northeast of the site. The shaping of the upper part of the project tower is intended by the architect to insure that its vertical elements, which are similar in height to the adjacent Holiday Inn building, would be in different planes, providing a distinct visual separation between the two buildings. The project would also comply with the policy of the Urban Design Element of the Comprehensive Plan to "promote harmony in the visual relationships and transitions between new and older buildings" (Policy 1, "Urban Design Element, Policies for Major New Development").

The project site includes a 4,820 sq. ft. parcel (Lot 25) which is in City ownership and was designated as a potential open space site in the Recreation and Open Space Element of the Comprehensive Plan (Amendment No. 7-8-75, January 4, 1978). The site was examined for development as a downtown mini park. The Recreation and Park Commission (RPC) determined that this parcel is not appropriate for such use because of its size and the shading caused on the parcel by nearby buildings. On April 9, 1981 the Recreation and Park Commission recommended to the City Planning Commission that the designation of the parcel as a potential open space site be removed and the parcel be offered for sale to the public (RPC Resolution No. 12456). The RPC further recommended that a portion of the proceeds from the sale of this property be deposited in the City's Open Space account to be used to develop, redevelop or otherwise improve open space resources within the Chinatown community. The Planning and Recreation and Park Commissions had a joint meeting on

July 7, 1981 to review and act upon this proposal. At that time, the Recreation and Parks Commission voted to remove the potential open space designation. The City Planning Commission voted, by motion, on July 16, 1981 to remove the potential open space designation of the parcel, thereby eliminating the property from the Recreation and Open Space Element of the Comprehensive Plan. On September 15, 1981, the Board of Supervisors voted to authorize the sale of Lot 25.

The project would comply with the open space requirement for residential use in the C-3 District (Section 135(d) of the City Planning Code). The project would include about 17,500 gross sq. ft. of common and private open space for the project residents.

The project will require discretionary review by the City Planning Commission (CPC) under the provisions of Resolution No. 8474, adopted January 17, 1980. The project would include approximately 40 residential condominium units which would exceed the site's allowable Basic Floor Area by about 86,200 gross sq. ft. (including the residential elevators and accessory recreation room). Under existing interim controls on downtown high-rise office development (Municipal Ordinance No. 240-80, effective July 1, 1980), buildings within the downtown commercial (C-3) district which contain residential units may be permitted development (floor area) bonuses by Conditional Use authorization. The proposed project design incorporates pedestrian amenities, including multiple building entrances, shortened walking distances and sidewalk widening, which may qualify for bonus floor area of about 67,400 gross sq. ft. (pursuant to Section 126 of the San Francisco Planning Code) to be used for the residential portion of the building. The project sponsor intends to request approximately 86,200 sq. ft. of bonus space to permit the amount of housing proposed.

The project sponsor proposes to provide 62 parking spaces (25,000 sq. ft.) and 2 freight loading spaces (3,300 sq. ft.) within the building's enclosed one-level plus mezzanine, double-height parking facility. About 17,000 sq. ft. of the parking space, representing seven percent of the gross office floor area, would be designated as short-term parking for the office portion of the building. Fifteen spaces, or about 6,000 sq. ft., would be allocated to the residential units as 150% of the residential parking requirement in a C-3 District. The project sponsor would apply for a Conditional Use authorization

to designate the remaining 2,000 sq. ft. of parking space as additional parking space for the residential units.

B. ENVIRONMENTAL IMPACTS:

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
1. <u>Land Use.</u> Would the proposed project:					
a. Be different from surrounding land uses?	___	___	<u>X</u>	___	<u>X</u>
b. Disrupt or divide the physical arrangement of an established community?	___	<u>X</u>	___	___	<u>X</u>

Although the project would develop combined housing and commercial space within a single high-rise structure, both high-density residential and office uses are found within the surrounding area. The site lies at the northwest corner of the City's Financial District, and the Transamerica and 601 Montgomery high-rise office buildings are located immediately east and south of the project site. Additionally, the Bank of America, Alcoa and One and Two Embarcadero Center high-rise office buildings are located within 3 blocks of the site. Surrounding residential uses include the Chinatown community one block west of the site, and the four, 25-story Golden Gateway towers (1,260 rental units) two to four blocks northwest of the site. The City's Redevelopment Agency is currently developing the 150-unit, low-rise Golden Gateway Commons condominium apartment complex within four blocks of the project site.

The project would replace about 4,900 sq. ft. of restaurant space, 3,000 sq. ft. of office space and 7,340 sq. ft. of parking space with approximately 4,000 sq. ft. of restaurant space, about 500 sq. ft. of ground-floor, retail space, 238,820 sq. ft. of office space, 25,140 sq. ft. of parking and loading space, 64,800 sq. ft. of residential space and 4,500 sq. ft. of indoor recreation space for residents.

2. Visual Quality and Urban Design. Would the proposed project:

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Obstruct or degrade any scenic view or vista open to the public?	___	___	<u>X</u>	___	<u>X</u>
b. Reduce or obstruct views from adjacent or nearby buildings?	___	<u>X</u>	___	___	<u>X</u>

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
c. Create a negative aesthetic effect?	<u> </u>	<u> X </u>	<u> </u>	<u> </u>	<u> X </u>
d. Generate light or glare affecting other properties?	<u> </u>	<u> </u>	<u> X </u>	<u> </u>	<u> X </u>

The building would not be visible from freeways due to intervening structures. The project would interrupt some views from nearby buildings; in general, interrupted views would be replaced by similiar views from the proposed structure. The adjacent Holiday Inn is north/south facing and occupants would not have a view of the proposed building./1/ Views from the project's residential units would be oriented north and east, with the exception of 16 units which would have a north/south orientation. With mitigation, such as window shades or curtains, nighttime light from adjacent office buildings would not adversely affect project residents. Residential units would be higher than the adjacent 19-story 601 Montgomery office building. East-facing units would have nighttime views of the lighted Transamerica building. However, the approximately 100-ft. distance from the site and the narrowed shape of the Transamerica building would be expected to reduce the apparent mass of that building as seen by residents.

The building would change the view of the Downtown, Financial District cityscape and urban forms as seen from Telegraph Hill. For example, from Telegraph Hill, views of the 19-story, 601 Montgomery St. building would be replaced with views of the sculptured 24-story project building, which would make a visual transition from the taller Bank of America and Transamerica buildings to the smaller-scale Jackson Square District, north and northeast of the site.

The building would contain no reflective glass or high intensity lighting, and hence would not impose a reflective or glaring light on other properties or The Embarcadero Freeway off-ramp.

The relationship of the project to design guidelines developed by the City in 1973 for a previously proposed project on the site and the potential visual effect of site development on the Portsmouth Corridor will be discussed in subsequent environmental documentation for the project.

NOTE - Visual Quality and Urban Design

/1/ Photographs showing views from rooms in the Holiday Inn are on file at the Department of City Planning, Office of Environmental Review, 45 Hyde St., Room 319.

3. Population/Employment/Housing. Would the proposed project:

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Alter the density of the area population?	<u>X</u>	<u> </u>	<u> </u>	<u> </u>	<u>X</u>
b. Have a growth-inducing effect?	<u>X</u>	<u> </u>	<u> </u>	<u> </u>	<u>X</u>
c. Require relocation of housing or businesses, with a displacement of people, in order to clear the site?	<u>X</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
d. Create or eliminate jobs during construction and operation and maintenance of the project?	<u>X</u>	<u> </u>	<u> </u>	<u> </u>	<u>X</u>
e. Create an additional demand for housing in San Francisco?	<u> </u>	<u>X</u>	<u> </u>	<u> </u>	<u>X</u>

The project would increase the number of employees on-site from approximately 30 to approximately 980. Approximately 14 existing employees, of the two restaurants, professional offices, and parking lot on the site, would be displaced. It can be expected that the project's estimated 950 office sector jobs would create about 1,140 additional "secondary" jobs in the city's business services sector, this could have a growth-inducing effect by attracting new residents to the City.

During construction a total of about 400 person-years of employment would be created, with an average of 150 workers employed at any one time.

The project would be expected to generate a demand for housing units in San Francisco. The effect this additional demand would have on the City's housing market will be evaluated in subsequent environmental documentation for the project. The proposed residential component of the project would contribute to mitigation of this anticipated housing impact. The effects of business displacement will also be addressed in the subsequent environmental document.

4. Transportation/Circulation. Would the construction or operation of the project result in:

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Change in use of existing transportation systems?	<u>X</u>	<u> </u>	<u> </u>	<u> </u>	<u>X</u>
b. An increase in traffic which is substantial in relation to existing loads and street capacity?	<u> </u>	<u> </u>	<u>X</u>	<u> </u>	<u>X</u>
c. Effects on existing parking facilities, or demand for new parking?	<u>X</u>	<u> </u>	<u> </u>	<u> </u>	<u>X</u>
d. Alteration to current patterns of circulation or movement of people and/or goods?	<u>X</u>	<u> </u>	<u> </u>	<u> </u>	<u>X</u>
e. Increase in traffic hazards to motor vehicles, bicyclists or pedestrians?	<u> </u>	<u>X</u>	<u> </u>	<u> </u>	<u>X</u>
f. A need for maintenance or improvement or change in configuration of existing public roads or facilities?	<u> </u>	<u> </u>	<u>X</u>	<u> </u>	<u>X</u>
g. Construction of new public roads?	<u> </u>	<u> </u>	<u>X</u>	<u> </u>	<u> </u>

The project would result in an increased use of existing transportation systems, both nearby freeways and local streets, and the local Municipal Railway (MUNI) transit and regional transit systems which serve Downtown San Francisco. The project would generate a parking demand that would be met partially by on-site parking. At least one permanent, long-term parking space would be provided for each four residential units according to City parking requirements for this zoning district. Approximately 45 short-term parking spaces would be provided as accessory parking for office space users. A total of about 62 parking spaces are proposed with the project.

A detailed analysis, including an estimate of the number of automobile, and freight vehicle trips generated by the project, the impacts of such traffic on nearby streets and intersections, an estimate of parking and loading needs, the effects of the project on pedestrian movements in the project vicinity, and project and cumulative impacts on the local MUNI transit routes and on regional systems will be presented in subsequent environmental documentation.

The project would require no change in the present pattern of circulation or in the configuration of existing public streets.

5. Noise.

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Would the proposed project result in generation of noise levels in excess of those currently existing in the area? (During construction)	___	<u>X</u>	___	___	<u>X</u>
b. Would existing noise levels impact the proposed use?	___	___	<u>X</u>	___	<u>X</u>
c. Are Title 25 Noise Insulation Standards applicable?	<u>X</u>	___	___	___	<u>X</u>

Noise levels in the area would not be expected to exceed currently existing levels as a result of project operation. Potential operational noise impacts associated with the project are of two types: noise generated by the building's mechanical equipment and project-related traffic. Construction noise associated with site development would temporarily increase noise in the area during the 18-month construction period.

The Downtown San Francisco noise environment is dominated by vehicular traffic noise. Traffic generated by the project during any hour of the day would cause traffic noise to increase by less than 1 decibel (dBA)./1/ A 1 dBA increase in environmental noise is undetectable by the untrained human ear.

Noise due to mechanical equipment is regulated by the San Francisco Noise Ordinance, Section 2909, "Fixed Source Noise Levels" (San Francisco Municipal Code, Part II, Chapter VIII Section 1, Article 29, 1972). The site is in the C-3-0 (Downtown Office) District. In this zone the ordinance restricts equipment noise levels at the property line to 70 dBA between 7 A.M. and 10 P.M. and 60 dBA between 10 P.M. and 7 A.M. During lulls in traffic, mechanical equipment noise levels of 70 dBA would tend to dominate the site noise environment. Equipment noise levels would be designed to meet the nighttime limit of 60 dBA and would not be audible above the ambient noise level of the site vicinity. This is particularly important due to the proximity of the Holiday Inn. Although mechanical equipment noise of 60 dBA

could be audible at the hotel, it is not expected that this noise would interfere with use of the hotel.

The Environmental Protection Element of the Comprehensive Plan indicates an existing day-night average noise level (Ldn) of 65 dBA on Washington St. and 70 dBA on Montgomery St./2/ The Element contains guidelines for determining the compatibility of land uses with various noise environments. For residential and office uses the guidelines recommend no special noise control measures in an exterior noise environment of up to an Ldn of 60 dBA and 70 dBA, respectively. As the exterior noise level at the height of the condominiums can be expected to be about 55 to 60 dBA, no special noise control measures would be required.

Title 25 of the California Administrative Code, Noise Insulation Standards, applies to all new residential structures, with the exception of single-family dwellings. The acceptable outdoor noise levels for all residential units is established as a community noise equivalent level (CNEL) equal to 60 dBA./3/ The exterior noise environment of the site exceeds a CNEL of 60 dBA at street level. The project requires an acoustical analysis to show that the interior residential CNEL requirement of less than 45 dBA with the windows closed would be met. As the project sponsor has stated that the project would be constructed to conform with Title 25 Noise Insulation Standards, existing noise levels would have no significant effect and no further discussion is needed./4/

Project construction would occur in 3 stages: demolition, excavation and construction of the new building. Throughout the 18-month construction period, trucks would be visiting the site, initially hauling away dirt and debris and then bringing materials. These activities would temporarily increase noise levels in the surrounding area.

The project is expected to use a mat (cellular) foundation, which would not require pile driving. The San Francisco Noise Ordinance limits the noise emission of powered construction equipment, except impact tools, to 80 dBA at 100 ft. It also prohibits construction work at night from 8 P.M. to 7 A.M., if the noise emission from such work exceeds the ambient noise level by 5 dBA at the property line, unless a special permit is authorized by the San Francisco Department of Public Works.

The Holiday Inn located adjacent to the site would be the most sensitive receptor of construction noise and noise impacts could result during the construction period. Although the hotel wall facing the site is constructed of at least one-ft.-thick concrete, interior noise levels at the hotel during project construction could be expected to reach as high as 46 dBA. At this level, the sounds would be audible but would not interfere with human speech or sleep. Noise levels in the surrounding 601 Montgomery St. and Transamerica buildings could reach 65 dBA and average about 60 dBA. Noise levels this high would interfere with human speech and concentration, distracting employees and degrading their performance./5/ Construction noise will be discussed in subsequent environmental documentation for the project.

NOTES - Noise

/1/ Decibel (dB) is a logarithmic unit of sound energy intensity. Sound waves, traveling outward from a source, exert a force known as sound pressure level (commonly called "sound level"), measured in decibels. dBA is decibel corrected for the variation in frequency response of the typical human ear at commonly-encountered noise levels.

/2/ Ldn is an averaged sound level measurement, based on human reaction to cumulative noise exposure over a 24-hour period, which takes into account the greater annoyance of nighttime noises. Noise between 10 P.M. and 7 A.M. is weighted 10 dBA higher than daytime noise.

/3/ Community noise equivalent level (CNEL); similar to Ldn except that sound level measurements taken between 7 P.M. and 10 P.M. are weighted 5 dBA higher than daytime sounds in addition to the 10 dBA 10 P.M. to 7 A.M. weighting.

/4/ Pat Gilligan, Crow-Spieker Companies, telephone communication September 15, 1981.

/5/ National Institute for Occupational Safety and Health, Occupational Exposure to Noise, 1972

6. Air Quality/Climate. Would the proposed project result in:

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Violation of any ambient air quality standard or contribution to an existing air quality violation?	<u>X</u>	<u> </u>	<u> </u>	<u> </u>	<u>X</u>
b. Exposure of sensitive receptors to air pollutants?	<u> </u>	<u>X</u>	<u> </u>	<u> </u>	<u>X</u>
c. Creation of objectionable odors?	<u> </u>	<u> </u>	<u>X</u>	<u> </u>	<u> </u>
d. Burning of any materials including brush, trees, or construction materials?	<u> </u>	<u> </u>	<u>X</u>	<u> </u>	<u> </u>

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
e. Alteration of wind, moisture, or temperature (including sun shading effects), or any change in climate, either locally or regionally?	<u>X</u>	<u> </u>	<u> </u>	<u> </u>	<u>X</u>

Two types of air quality impacts would result from the proposed project: short-term construction impacts including particulate and hydrocarbon emissions, and long-term vehicle-related impacts, including carbon monoxide emissions. Concentrations of air pollutants are monitored by the Bay Area Air Quality Management District (BAAQMD) at Van Ness Ave. and Ellis St., about one-and-a-quarter miles southwest of the site.

Demolition, grading, and construction activities would affect local air quality for approximately 12 months. Construction activities, in general, generate approximately 1.2 tons of particulate (dust) per acre per month of activity./1/ This includes emissions from land clearing, excavation and project construction. Assuming 18 months of demolition, excavation, and construction activity on 0.4 acre, a total of approximately 9 tons of particulates would be generated. Without mitigation, this would result in a worst-case 24-hour average concentration of approximately 6,400 ug/m³ (micrograms per cubic meter) at and adjacent to the site, 64 times the 24-hour State standard of 100 ug/m³. The eight-hour concentration would be about three times the 24-hour concentration; no standard has been established for 8-hour particulate concentrations. Except to persons with respiratory disorders, large-size construction particulates are more a nuisance than a hazard, and settle out of the atmosphere rapidly with increasing distance from the source, in contrast to gaseous pollutants and to small-size particulates from combustion.

Pouring asphalt for driveways and using oil-based paints would generate hydrocarbon emissions. These types of emissions are controlled by Regulation 8 rules of the BAAQMD./2/ Diesel powered construction equipment would emit (in decreasing order by weight) nitrogen oxides, carbon monoxide (CO), sulfur oxides, hydrocarbons, and particulates. These emissions would not have any measurable effect on citywide or regional air pollution concentrations or on the frequency of standards violations./3/

Project-related traffic would add to local and regional accumulations of CO, hydrocarbons and nitrogen oxides, (the latter two precede ozone), particulates and sulfur oxides during adverse meteorological conditions, such as inversions (U.S. EPA, 1977, Compilation of Air Pollutant Emission Factors, AP-42). Ozone is a regional problem, and CO and particulates are local problems (ABAG, BAAQMD, and MTC, January 1979, 1979 Bay Area Air Quality Plan, San Francisco Bay Area, Environmental Management Plan). The project would thus impede attainment of standards, but would probably have no measurable effect on citywide or regional concentrations, or on the frequency of violation of the standards. These conclusions are based on the projected air quality impacts reported in Daon, Environmental Impact Report (EIR), EE 79.57 (pp. 189-193). The Daon project would contain about the same area as the proposed project and is not expected to cause violations of air quality standards, although it would minimally increase concentrations in the immediate area by less than 2%. If there were no air quality control strategies (emission standards), cumulative development in the Downtown area would increase ambient concentrations and the frequency of standard violations. Standards violations are not expected to occur and ambient concentrations are expected to decrease due to reduced emissions resulting from control strategies. Project related and cumulative air quality impacts will be evaluated in subsequent environmental documentation for the project.

The project would affect wind speed ratios at street level, probably increasing west winds along Washington St. The project would increase shadows on sidewalks and streets along Montgomery and Washington Sts. The building can also be expected to cast shadows on the buildings along the north side of Washington St. The effects of wind, sun and shadow on project occupants and nearby uses will be evaluated in the subsequent environmental documentation for the project.

NOTES - Air Quality/Climate

/1/ U.S. Environmental Protection Agency, 1975, Compilation of Air Pollutant Emission Factors, Supplement No. 5, p. 11.2.4-1.

/2/ Bay Air Quality Management District (BAAQMD), 1980, Rules and Regulations, BAAQMD, San Francisco.

/3/ U.S. Environmental Protection Agency, 1975, Compilation of Air Pollutant Emission Factors, Supplement No. 4, p.3.2.7-2,-3.

7. Utilities and Public Services. Would the proposed project:

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Have an effect upon, or result in a need for new or altered, governmental services in any of the following?					
fire protection	—	X	—	—	X
police protection	—	—	X	—	X
schools	—	—	X	—	X
parks or other recreational facilities	—	—	X	—	X
maintenance of public facilities	—	—	X	—	—
power or natural gas	—	—	X	—	—
communications systems	—	—	X	—	—
water	—	—	X	—	X
sewer/storm water drainage	—	—	X	—	X
solid waste collection and disposal	—	—	X	—	X

Fire Protection: The project would increase the building area and the number of persons using the site. The introduction of residential use would increase the potential fire hazard over that of office use. The project would not require additional Fire Department personnel or equipment, except in the case of a major fire or disaster. Present hydrants and water supply are adequate./1/

Police Protection: The project would increase population and private property on the site, thus potentially increasing crime. The site is within the Central Police District (headquarters at 766 Vallejo St.). The project area is patrolled 24-hours a day by radio-dispatched patrol cars. There are no foot patrol beats in the area immediately surrounding the site. The nearest foot beat is about one block north of the site, on Columbus Ave. The Police Department does not expect to require additional police personnel or equipment to serve the project./2/ Appropriate design measures (alarms, adequate lighting at entryways, 24-hour security personnel, closed-circuit camera systems, secured and separate entrances for the residential areas with computerized lock systems) would reduce the demand for police personnel.

Schools: The project is not expected to house many families with school-aged children. San Francisco school system is currently losing student population and would be able to serve any additional students generated by the project./3/

Parks or other recreational facilities: The project would provide private and common open space and common recreational facilities for residents. This would include a health club and pool area. It is expected that project residents would be able to enjoy existing public parks in the vicinity as well as existing private recreational facilities. It is not anticipated that the project would generate excessive demand on parks and other recreational facilities.

Water: The project site is served by a 6-inch-diameter main located on the north side of Montgomery St. and an 8-inch-diameter main located on the west side. Both mains provide 72 pounds of static pressure and 61 pounds of working pressure. The project would increase water use at the site by approximately 32,000 gallons per day (gpd). Existing mains have sufficient capacity and pressure to handle the additional flow demand with hook-up from Montgomery St./4/

Sanitary Sewer: The site is serviced by rectangular, 3-ft. by 5-ft., combined storm and sanitary sewers located in both Montgomery and Washington Sts. The project would generate an estimated additional 32,000 gpd of wastewater. The sewers serving the site have sufficient capacity to carry the additional load, and no improvements are expected to be required.

Project-generated wastewater flows represent 0.05% of the average daily flows of 65 million gallons per day (MGD) currently being treated at the North Point Water Pollution Control Plant and would represent about 0.04% of the 85 to 90 MGD treatment capacity of the Southeast Water Pollution Control Plant when this facility goes into interim operation in 1982. Flows to the North Point plant, which currently serve the site, would be diverted to the Southeast plant at that time. North Point would then become a wet weather combined storm and sanitary sewage treatment facility. No expansion of the present collection and treatment system would be required to serve the project./5/

Solid Waste Disposal: When in operation, the project would generate about 2 tons of solid waste per day. Golden Gate Disposal Company, which currently serves the site, anticipates no problem in meeting collection demand./6/

NOTES - Utilities and Public Services

/1/ Chief Joseph A. Sullivan, Division of Support Services, San Francisco Fire Department, written communication, April 28, 1981.

/2/ Sergeant James Farrell, Division of Planning and Research, San Francisco Police Department, telephone communication, April 23, 1981.

/3/ Robert Haslam, Property Management Department, San Francisco Unified School District, telephone communication, September 15, 1981.

/4/ Mr. Harlow Swain, Senior District Water Serviceman, Engineering Department, San Francisco Water Department, telephone communication, April 24, 1981.

/5/ Mr Nathan Lee, Engineering Associate II, Division of Sewer System Design, San Francisco Clean Water Program, telephone communication, April 24, 1981. Mr. Don Hyashi, Director, Citizens Participation, San Francisco Clean Water Program, telephone communication, April 24, 1981.

/6/ Mr. Fiore Garbarino, Treasurer, Golden Gate Disposal Company, telephone communication, April 23, 1981.

8. Biology.

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Would there be a reduction in plant and/or animal habitat or interference with the movement of migratory fish or wildlife species?	___	___	<u>X</u>	___	___
b. Would the project affect the existence or habitat of any rare, endangered or unique species located on or near the site?	___	___	<u>X</u>	___	___
c. Would the project require removal of mature scenic trees?	___	___	<u>X</u>	___	___

9. Land. (topography, soils, geology) Would proposed project result in or be subject to:

a. Potentially hazardous geologic or soils conditions on or immediately adjoining the site? (slides, subsidence, erosion, and liquefaction)	___	___	<u>X</u>	___	<u>X</u>
b. Grading? (consider height, steepness and visibility of proposed slopes; consider effect of grading on trees and ridge tops)	___	___	<u>X</u>	___	___
c. Generation of substantial spoils during site preparation, grading, dredging or fill?	___	___	<u>X</u>	___	<u>X</u>

Analysis of site soils conditions has been completed by a geotechnical consultant./1/ The project sponsor would follow the recommendations of the geotechnical consultant in site development. Data indicate that the site is underlain by recent, unconsolidated deposits of clays, silts, sands and

combinations thereof. All these deposits are underlain by Franciscan bedrock material which is suitable for shallow building foundations such as spread footings or the concrete mat type proposed for the project. Grading would be limited to foundation preparation. The average depth of excavation would be about 20 ft.; the maximum depth of excavation would be about 25 ft.

Demolition of the existing structures and parking lot would result in the removal of used brick, concrete and pavement from the site.

NOTES - Land

/1/ Lee and Praszker, Consulting Civil Engineers, July 30, 1981, Geotechnical Investigation of the Montgomery - Washington Building.

10. Water. Would the proposed project result in:

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Reduction in the quality of surface water?	<u> </u>	<u> </u>	<u> X </u>	<u> </u>	<u> </u>
b. Change in runoff or alteration to drainage patterns?	<u> </u>	<u> </u>	<u> X </u>	<u> </u>	<u> </u>
c. Change in water use?	<u> X </u>	<u> </u>	<u> </u>	<u> </u>	<u> X </u>
d. Change in quality of public water supply or in quality or quantity (dewatering) of groundwater?	<u> </u>	<u> X </u>	<u> </u>	<u> </u>	<u> X </u>

On-site water consumption would increase by approximately 32,000 gallons per day. The vacant Lot 25, which is partially excavated and undrained, would drain into the City storm sewer system upon project completion. According to the geotechnical investigation prepared for the site, the depth of groundwater table is between elevation -2 and -7, San Francisco City Datum (SFCD)./1/ Elevation 0, SFCD, is 8.6 ft. above mean sea level. Project-related excavation would extend below groundwater level and dewatering would be required. Dewatering using sumps and pumps would be temporary and would take place during foundation preparation activities. Dewatering would be done inside the building excavation; no dewatering would occur outside of the excavation. Excessive drawdown of the groundwater level outside the excavation could produce some local subsidence which could damage the streets or older brick buildings in the immediate vicinity of the site. Water level outside the excavation would be monitored using groundwater observation

wells. Due to the sandy texture of subsurface deposits, the groundwater levels outside the excavation would not be appreciably lowered. The project would include measures which would mitigate potential impacts associated with excavation and dewatering activities (see p. 27).

NOTE - Water

/1/ Lee and Praszker, Consulting Civil Engineers, July 30, 1981, Geotechnical Investigation of the Montgomery - Washington Building.

11. Energy/Natural Resources. Would the proposed project result in:

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Any change in consumption of energy?	<u>X</u>	<u> </u>	<u> </u>	<u> </u>	<u>X</u>
b. Substantial increase in demand on existing energy sources?	<u> </u>	<u> </u>	<u>X</u>	<u> </u>	<u>X</u>
c. An effect on the potential use, extraction, conservation or depletion of a natural resource?	<u> </u>	<u>X</u>	<u> </u>	<u> </u>	<u>X</u>

The project would result in a net increase in energy consumption on the site. The project would conform to energy requirements of Title 24 of the California Administrative Code, so that energy use per square foot of floor area would be less than at present. As the final building design has not been developed, the amount of total energy consumption and efficiency of energy uses cannot be identified. Energy consumption will be discussed in subsequent environmental documentation for the project as information becomes available.

There would be an increase in peak-hour electrical demand resulting from elevator use, in addition to peak-hour demand characteristics of other uses in the structure. Other aspects of electrical and natural gas demand characteristics cannot be identified until specific building designs are developed. The project would contribute to cumulative energy consumption by Downtown development that will result in depletion of nonrenewable energy resources.

The possibility that shadows from the project could reduce the feasibility of future active solar energy collection installations in some off-site locations will be studied in subsequent environmental documentation for the project. No

existing active solar energy collection installations would be affected, as none are located in the immediate area, north of the site. No other natural energy resources would be directly affected.

12. Hazards. Would the proposed project result in:

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Increased risk of explosion or release of hazardous substances (e.g., oil, pesticides, chemicals or radiation), in the event of an accident, or cause other dangers to public health and safety?	___	___	<u>X</u>	___	___
b. Creation of or exposure to a potential health hazard?	___	___	<u>X</u>	___	___
c. Possible interference with an emergency response plan or emergency evacuation plan?	___	___	<u>X</u>	___	___

13. Cultural. Would the proposed project:

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Include or affect a historic site, structure or building?	___	<u>X</u>	___	___	<u>X</u>
b. Include or affect a known archaeological resource or an area of archaeological resource potential?	___	___	<u>X</u>	___	___
c. Cause a physical change affecting unique ethnic or cultural values?	___	___	<u>X</u>	___	<u>X</u>

No known buried ships or other archaeological resources occur on the site, which is presently occupied by two structures. The site is inland of the 1849 shoreline (see p. 29 for mitigation in the event of an archaeological finding on the site).

The project would result in the removal of the two existing buildings on the site. The two-story building housing the Lafayette Restaurant and offices at 643 Montgomery St. was rated "C"--of "Contextual Importance" in the architectural survey conducted for the Foundation for San Francisco's Architectural Heritage by Charles Hall Page & Associates, Inc. The structure is listed in the Foundation's publication, Splendid Survivors. It is not, however, included in the City's official list of Architecturally and/or

Historically Significant Buildings in the Downtown, adopted by the City Planning Commission on May 29, 1980. The structure was completed in 1908 and is part of the series of post-1906 reconstruction brick buildings which are diminishing in number throughout the Downtown. The northwest portion of Lot 4, currently used as a surface parking lot, is a State Historic site. The site formerly contained the Bolton & Marron Building, listed in the California Historic American Building Survey (HABS).

The one-story building at 639 Montgomery St., occupied by the Iron Pot Restaurant, is not rated in either architectural survey. The restaurant was, however, a site of bohemian cultural activity during the 1940's and early 1950's related to the so-called Montgomery Block. The Montgomery Block, residence of many artists during the period, is now occupied by the Transamerica pyramid building.

The Jackson Square Historic District, which encompasses an area bounded by Washington St., Pacific St., Columbus Ave. and Sansome St. lies north and northeast of the project site. In 1972, this area was made San Francisco's first historic district in recognition of its special architectural and aesthetic character. Once the northern edge of San Francisco's business district, land use in this area changed when the downtown shifted south in the late 1860's. The Jackson Square District went from banking, retail and professional uses to liquor and tobacco warehousing, and later to printing and paper warehousing. In the 1950's the vintage red-brick and Victorian buildings were refurbished and occupied by interior decorators and wholesalers. By the late 1960's professional firms, and many restaurant and bars relocated from the Financial District had occupied the area, raising rents to their current level. Today Jackson Square has some of the most elaborate surviving Victorian commercial buildings in San Francisco, many of which are included in the City's official list of Architecturally and/or Historically Significant Buildings in the Downtown. For example, the original Transamerica Corporation Building is located on the corner between Columbus Ave. and Montgomery St., north of the project site across Columbus Ave.

The project site is within a few blocks of several architecturally significant buildings in the Financial District. The Kohl Building at 400 Montgomery St., the Financial Center Building at 405 Montgomery St., the Anton Boreland

Company Bank at 440 Montgomery St., and the original Bank of America Building at 552 Montgomery St. were rated "A" for "highest architectural importance" in the survey conducted for the Foundation for San Francisco's Architectural Heritage. (The Kohl Building, The Anton Boreland Company Bank and the original Bank of America Building were rated "4" in the City's official list of Architecturally and/or Historically Significant Buildings; the 405 Montgomery St. building was not rated in this survey.) The American-Asian Bank at 500 Montgomery St. and the building at 520 Montgomery were rated "B" for "major architectural importance" in the the Heritage survey. (The American-Asian Bank was rated 4/5 in the City's official list; the 520 Montgomery St. building was not rated in this survey.) The Old Subtreasury Building at 608-610 Commercial St is designated City Landmark No. 34 and was rated 3 in the City's official list.

Directly south of the project site, is a California registered hisorical landmark. The 601 Montgomery St. Building is located on the original site of the Western Regional Headquarters of the Russsell, Majors and Waddell Company. This firm, which had its main office in Leavenworth, Kansas, founded the Pony Express and conducted operations in San Francisco from 1860 to 1861. There are six plaques on the 601 Montgomery St. property from organizations commemorating that site's history.

The project site is located within the Downtown Financial District (C-3-0) and is not immediately adjacent to the Chinatown community. The project would be expected to have no measurable effect on the Chinese Cultural Center located in the Holiday Inn. Therefore, the project would not affect the unique ethnic or cultural values of this community.

C. MITIGATION MEASURES:

	<u>Yes</u>	<u>No</u>	<u>Disc.</u>
Are mitigation measures included in the project?	<u>X</u>	<u>—</u>	<u>X</u>
Are other mitigation measures available?	<u>maybe, if need is identified in subsequent environmental documentation.</u>		

Mitigation Measures proposed as part of the project include the following:

URBAN DESIGN

- The project's sculptured upper-level facade is intended by the architect to (1) reduce the apparent scale and bulk of the building; (2) provide visual interest to viewers from Telegraph Hill and the Jackson Square District; and (3) serve as an apparent transition in height from the taller high-rise buildings of the C-3-0 district which frame the project to the low-rise structures of the Jackson Square District, north and northeast of the site.
- The project would include pedestrian amenities; small, pedestrian-scale retail activity; and sidewalk space designed to improve pedestrian access to work, shopping and passive recreation spaces and transit facilities as well as contribute to a visually interesting streetscape. Proposed pedestrian amenities include street trees and sidewalk plantings, multiple building entrances, widened sidewalks and ground-floor commercial activity. Ground-floor commercial activity would include uses such as a kiosk flower stand, newsstand, automatic banking terminal and other "soft" retail space, and would not include any financial institutions.

POPULATION/EMPLOYMENT/HOUSING

- The project sponsor would assist any of the existing tenants on the project site in relocation activities.
- The project sponsor proposes to provide approximately 40 residential condominium units on-site. These units would vary from 1,000 to 2,500 sq. ft. providing a range in size. Project housing would help mitigate increased demands on the city's housing supply which may be generated by the project's office development.

TRANSPORTATION/CIRCULATION

- The project sponsor would encourage transit use through the sale on-site of BART and MUNI passes to employees, and by encouraging employee carpool and vanpool systems in cooperation with RIDES for Bay Area commuters.

- Secure bicycle parking facilities would be provided, to encourage the use of bicycles by employees and messengers.
- During the construction period, project truck movement would be limited to the hours between 9 A.M. and 4 P.M., to minimize peak-hour traffic conflicts.
- The project sponsor would participate proportionately in whatever legal means is finally adopted by the Board of Supervisors to contribute funds for an established Downtown transit assessment district to meet peak demands caused by cumulative office development in the Downtown.

NOISE

- Prior to construction, the project sponsor would meet with the Holiday Inn management to negotiate arrangements for hotel guests who will sleep during the daytime to be assigned hotel rooms located farthest from the construction site and noise sources. Additional measures would be arranged as necessary and feasible for hotel and adjacent office uses.
- The project would comply with Title 25 of the California Administrative Code regarding noise insulation for residential uses.
- The project contractor would comply with all requirements of the San Francisco Noise Ordinance, including limiting noise emissions from powered construction equipment to 80 dBA at a distance of 100 ft. The project contractor would muffle and shield intakes and exhausts, shroud or shield impact tools, and use electric-powered rather than diesel-powered construction equipment, as feasible. There would be no pile driving.

AIR QUALITY/CLIMATE

- During excavation, unpaved demolition and construction areas would be wetted to hold down dust; if this were done at least twice a day with complete coverage, particulate emissions (dust) would be reduced about 50%.

- The general contractor would maintain and operate construction equipment in such a way as to minimize exhaust emissions. During construction, trucks in loading or unloading queues would be kept with their engines off when not in use to reduce vehicle emissions.
- Residential open space would be designed and sheltered to maximize natural light and air and minimize wind on-site. Should the results of a detailed wind analysis indicate that the project would have substantial wind effects, design alternatives would be considered to mitigate wind effects.

UTILITIES AND PUBLIC SERVICES

- To reduce the demand on police protection services, the project would incorporate internal security measures such as a 24-hour staffed guard station in the lobby area; closed circuit television cameras and internal security personnel; well-lighted entries; alarm systems; separate security elevator and locked entrances with telephones for the residential portion of the building; and computerized office and residential entrances accessible only by pre-programmed magnetic keys.
- The project would incorporate all emergency response systems stipulated by the Life Safety Code, including fire alarms, an emergency communication system, an emergency power supply and an on-site emergency water supply. These measures would reduce hazards to building occupants during an earthquake or fire.
- The project would incorporate low-flow faucet and toilet fixtures to reduce water consumption and wastewater.
- The building would be equipped with a trash compactor to reduce the volume of solid waste requiring storage and transport. Separate storage facilities for recyclable waste material would be provided for both office and residential uses.

LAND (Topography, Soils, Geology)

- A detailed foundation and structural design study has been conducted for the building by a California licensed structural engineer and a geotechnical consultant. The project sponsor would follow the recommendations of these studies during the final design and construction of the project.
- The project sponsor would post a surety bond, if required by the San Francisco Department of Public Works, before issuance of a permit to excavate. Such a bond would protect the City against damages to City-owned sidewalks, streets and utilities.
- The project sponsor would require the project contractor and sub-contractors to obtain a Faithful Performance and Payment Bond, if proper financial capability is not evident, and to be responsible for any damage to existing buildings which might result from excavation. This bond would protect the project sponsor and owners of adjacent properties if any damage to these properties were to result from construction activities.
- Excavation pit walls would be shored up and protected from slumping or lateral movement of soils into the pit. Shoring and sheeting with soldier beams could be used for this purpose. The contractor would comply with the Excavation Standards of the California Occupational Safety and Health Agency (Department of Industrial Relations).
- Montgomery, Washington and Merchant Sts. would be mechanically swept by the demolition and excavation contractors, as required by the San Francisco Building Code, so that silt would not be washed into the storm drains and dust would be reduced. This would be a provision of excavation and demolition contracts.
- Groundwater observation wells would be installed for monitoring the level of the water table and other instruments to monitor potential settlement and subsidence. The City would require a lateral and settlement survey to monitor any movement or settlement of surrounding buildings and adjacent streets during the dewatering. Control lines and benchmarks would be

established for monitoring horizontal and vertical movement. Costs for the survey and any necessary repairs to services under the streets would be borne by the contractor.

- If, in the judgment of City engineers, unacceptable subsidence occurs during the construction, groundwater recharge would be begun to halt the settlement. This might cause a delay in construction.
- Groundwater pumped from the site would be retained in a holding tank to allow suspended particles to settle, if this is found necessary by the Industrial Waste Division of the Department of Public Works, to prevent sediment from entering the storm drain/sewer lines.

ENERGY

- Wherever possible, office suites would be equipped with individual light switches, time clock operation and fluorescent lights, to conserve electric energy. A centralized management computer system would monitor off-hour (evening and weekend) heating and air-conditioning use. Tenants would be charged for off-hour heating and air-conditioning service used to promote energy conservation.
- The project would comply with the former Federal Energy Building Temperature Restrictions in the operation of heating, ventilating and air conditioning (HVAC) equipment. The HVAC system would be equipped with an economizer cycle to use outside air for cooling, as feasible.
- Whenever possible, the HVAC system would be designed to recycle waste heat to heat the project swimming pool, domestic water for office use and recreation facility water supply.
- Residential units would have individually metered gas (if applicable) and electric services.
- Residential and office water heating systems would be insulated to minimize heat loss. In residential units, water heaters would be placed as close as possible to the source of use (sinks, showers, dishwashers) to minimize heat loss.

CULTURAL

- Should evidence of cultural or historic artifacts of significance be found during project excavation, the Environmental Review Officer and the President of the Landmarks Preservation Advisory Board would be notified. The project sponsor would select an archaeologist to help the Office of Environmental Review determine the significance of the find and whether feasible measures, including appropriate security measures, should be implemented to preserve or recover such artifacts. The Environmental Review Officer would then recommend specific mitigation measures, if necessary, and recommendations would be sent to the State Office of Historic Preservation. Excavation or construction which might damage the discovered cultural resources would be suspended for a maximum of four weeks to permit inspection, recommendation and retrieval, if appropriate.
- The project sponsor would install a plaque on the project site to commemorate the history of the Bolton & Marron Building, listed in the California Historic American Building Survey.

D. ALTERNATIVES:

Yes	No	Disc.
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Were other alternatives considered:

<u>X</u>	<u> </u>	<u>X</u>
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The project sponsor is considering two alternatives to the proposed project. Alternative project plans include:

1. A 215-ft. high (14:1 FAR) office building on the currently proposed project site (17,400 sq. ft.). This alternative would not include housing and would not require a conditional use authorization allowing for residential floor area bonuses;
2. An office/condominium building on a smaller 12,580 sq. ft. site, which excludes the presently City-owned Lot 25. This alternative would be about 270 ft. in height with an FAR of 14:1 for the office portion of the building. Allowable bonuses would be applied for residential use on the site;

3. An office/condominium building which would comply with all development controls recommended in the Department of City Planning document, Guiding Downtown Development. This alternative would involve development on the four parcels comprising the project site. Office space would represent an FAR of 12:1; residential use would represent an FAR of 5:1; and
4. The no project alternative. This alternative would retain the existing structures on the project site.

E. MANDATORY FINDINGS OF SIGNIFICANCE:

- | | Yes | No | Disc. |
|--|----------|----------|----------|
| 1. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal, or eliminate important examples of the major periods of California history or prehistory? | ___ | <u>X</u> | ___ |
| 2. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? | <u>X</u> | ___ | ___ |
| 3. Does the project have possible environmental effects which are individually limited, but cumulatively considerable? | <u>X</u> | ___ | <u>X</u> |
| 4. Would the project cause substantial adverse effects on human beings, either directly or indirectly? | ___ | <u>X</u> | ___ |

5. Is there a serious public controversy concerning the possible environmental effect of the project?	Yes No Disc. _____ <u> X </u> <u> X </u>
---	---

The project would provide mixed-use but could permanently change the physical interface between the Financial District, Chinatown, North Beach and Jackson Square areas. This will be considered in further environmental documentation for the project. The project would contribute to cumulative traffic increase in the downtown. Some concern has been expressed about the effect of project design on the surrounding area and that there be adequate transfer of public open space from the site Lot 25 to the Chinatown area. These concerns will be considered in subsequent environmental documentation for the project.

APPENDIX B: WIND-TUNNEL STUDY

MONTGOMERY-WASHINGTON BUILDING

I. MODEL AND WIND TUNNEL FACILITIES

Model

A 1/50 scaled model of the downtown San Francisco area bounded by Pacific Avenue on the north, Sacramento Street on the south, Stockton Street on the east, and Sansome Street on the west was provided by ESA, Inc. The model was capable of having three configurations (the existing setting, the proposed project and an alternative design) available for separate wind-tunnel testing.

Wind Tunnel Facilities

The University of California at Davis environmental wind tunnel was built for testing natural atmospheric boundary layer flows past surface objects such as buildings and other structures. The tunnel has an overall length of 22 meters (m) (72 ft.), a test section of 1.22 m (4 ft.) wide by 1.83 m (6 ft.) high and has an adjustable false ceiling. Wind speeds within the tunnel can be varied from 1 to 4 meters per second (m/s) or 4.8 to 19.3 miles per hour (mph).

The atmospheric boundary layer flow over the downtown area was simulated by an upwind network of turbulence generators. The wind tunnel's false ceiling was adjusted to provide a zero-pressure-gradient downstream flow. The adjustment of the flow to zero-pressure-gradient flow is known to properly model atmospheric boundary layers near the surface of the earth. The long flow development length allows a naturally turbulent boundary layer to develop and accurately models the full-scale flow.

II. TESTING PROCEDURE

The wind study was divided into two parts: flow visualization and wind-speed measurements. The flow visualization observations were performed by injecting a continuous stream of smoke at various surface locations. The subsequent motion of the smoke was recorded and prevailing wind directions determined. Wind-speed measurements were made at 13 surface locations using a hot-wire anemometer, an instrument that directly relates rates of heat transfer by electronic signals. The hot-wire signals are proportional to the magnitude and steadiness of the wind. Both the mean wind speeds and corresponding turbulent intensities were measured. Thus high wind speeds and gustiness (large variable changes in wind speeds over short changes in time) could be detected. Hot-wire measurements made close the surface have an inherent uncertainty of $\pm 5\%$ of the true values.

Calibration measurements were made before and after each series of hot-wire experiments. The calibration was accomplished by means of a Thermo-System Incorporation (TSI) Model #1126 hot-wire anemometer calibrator especially designed for low wind speeds. The calibration is accurate to $\pm 1\%$. The flow above the model was adjusted to the same wind speed of 3.67 m/s (12 ft/sec or 8.2 mph) for all experiments. The ratio of near surface speed to freestream wind speed was calculated from the hot-wire measurements and is presented on the attached figures.

Experiments were performed for two prevailing wind directions, west and northwest for the existing setting, proposed project and Alternative Five design. These wind conditions are the most common in San Francisco, and are therefore the most representative for evaluation purposes. All hot-wire measurements were taken at the same series of surface points around the building site for both wind directions and the three building settings.

III. TEST RESULTS AND DISCUSSION

The measured wind speeds are expressed as percentage of the freestream wind tunnel speed. The numerical ratios displayed on the figures can be

approximately interpreted by using the following scale presented in Table I. The assessment of wind impact on the surrounding settings is preliminary and should be construed only as an estimate of the projected actual wind environment. The scale presented in Table I is subjective.

TABLE I: RELATIVE INTENSITY OF SURFACE WINDS

<u>Intensity of Wind Speed</u>	<u>Percentage of Freestream Speed</u>
Low	0 - 19
Moderately low	20 - 29
Moderate	30 - 49
Moderately high	50 - 69
High	70 - 100
Very high	over 100

It should be noted that the plotted values are not actual wind speeds but ratios. Thus a point having "very high" wind speed could still experience light winds on a near-calm day. Likewise, a point found to have "low" wind speed could experience relatively high winds on a windy day.

Northwest Wind

- (i) Setting. Existing wind speeds at the site are generally low to moderate, varying in the measured speed ratios from 0.19 to 0.48, the majority are less than 0.30. There is a gusty corner at the intersection of Columbus Avenue, Washington and Montgomery Streets. There is a moderate wind along Washington Street. There are strong vertical vortices formed off of both the north and south downstream edges of the Transamerica Pyramid, creating turbulence at the Redwood park, east of the Pyramid, and a mild street level vortex on Kearny Street between Jackson and Washington Streets.
- (ii) Impact of project. The existing wind environment would be worsened by the project in four ways: (a) Moderately high winds (speed ratio of 0.58, an increase of about 160 percent from existing conditions) would prevail on Montgomery Street east of the project; (b) there would be a

30% increase in wind speed on Washington Street north of the project; (c) the intersection of Columbus Avenue, Washington and Montgomery Streets would experience an increase in wind speed of more than double existing conditions; and (d) an increased wind flow would occur at the intersection of Montgomery and Merchant Streets. Another change would be an increase of wind strength on the adjacent west side of the Holiday Inn building. There would be moderate, steady cross flow at the northeast corner of the project under the covered walkways. Decreased wind impacts would occur as follows: (a) flow at the intersection of Clay and Montgomery Streets would be reduced from 0.48 to 0.38 and would not be as gusty as it is now; and (b) the street-level vortex on Kearny Street would disappear.

There would be a recirculation zone from the downstream edge of the Holiday Inn building that would create a turbulent vortex in the area of the proposed swimming pool. A windscreen was tested on the model and minimized the recirculation zone in the wake region substantially.

- (iii) The Guiding Downtown Development Alternative (Alternative Five) would have essentially the same flow as the project except the moderately high wind (0.58) on Montgomery Street would be reduced to moderate winds (0.38), and flow north and northeast of the project would be reduced 28%. There would be increased street level turbulence at the intersection of Merchant and Clay Streets with Montgomery Street.

West Wind

- (i) Setting. Wind speeds at the project site are generally low to moderate, varying in the ratios from 0.13 to 0.46. There is a higher level of turbulent wind at the intersection of Columbus Avenue, Washington and Montgomery Streets; however, it is not as severe as for a northwest wind. There is a border line moderate to moderately high wind on Washington Street directly north of the Transamerica Pyramid. Strong vertical vortices are formed off both north and south downstream edges of the Transamerica Pyramid, creating turbulence at the Redwood park, east of the Pyramid. All other flow features are not undesirable.

- (ii) Impact of project. The project would cause changes in the wind flow near the site in the following manner: (a) North of the proposed building there would be a region of flow recirculation creating an undesirable surface condition. There would be a 14% increase in wind speed. It would be an undesirable wind changing over short periods of time (near the northeast corner of the proposed building). Also, rapid changes in wind directions over short distances would occur directly north (at the mid-streetwise length) of the proposed building, causing pedestrian discomfort. (b) There would be a higher level of turbulence on Washington Street north of the Transamerica Pyramid. However, the mean wind speed would be generally less than the under existing conditions, thus minimizing the turbulent effect. (c) Directly east of the proposed building there would be increased street-level turbulence and gustiness of winds. It would be periodic and conceivably change over short distances under the covered walkways and is highly undesirable.

The remainder of the flow environment is essentially the same existing conditions.

There is a strong recirculation zone shed downstream from the Holiday Inn building that creates high levels of turbulence in the area of the proposed pool. A windscreen was tested and it minimizes the recirculation zone in the wake region.

- (iii) The Guiding Downtown Development Alternative (Alternative Five) would be different than the project wind environment in the following manner: (a) There would be a moderate wind flow directly north of the proposed building. Thus the recirculation zone north of the proposed building would be eliminated. The area of rapid change of flow direction would vanish and (b) There would be no vertical vortices shed from the north and south downstream edges of the Transamerica Pyramid.

III. MITIGATION MEASURES

There are two types of mitigating measures to reduce windspeeds. the first involves major design changes to reduce surface winds near the project such as different building orientations or changes in size or shape. This type of mitigation was not considered in the wind tunnel study.

The second type of mitigation measure involves additions to the project that would provide local shelter for pedestrians. Small structures such as street trees and other vegetation could function as windbreaks.

Generally, the presence of the proposed building would not alter the existing west wind environment, except directly north and possibly east of the proposed building. Enclosure of the undercover walkway area, such as street-side glass walls, vegetation or other street-side screening, would provide pedestrian protection and may eliminate the project's recirculating flow problem by modifying the flow environment similar to that of the Alternative. Also rows of street trees along Montgomery Street between Washington and Merchant Street would help minimize the turbulence and gustiness.

The proposed building subjected to northwest wind would generally worsen conditions along Montgomery Street between Washington and Clay Streets. In order to significantly improve wind conditions along Montgomery Street a major windbreak would be required along the street. This could only be accomplished by drastically altering the proposed and alternate building designs. The second type of mitigation (as stated in the above paragraph) would only minimize the moderately high northwesterly winds on Montgomery Street.

NOTE: The following Figures show wind flow patterns and wind speed ratios for existing conditions, the proposed project, and Alternative Five. These diagrams are based on the wind tunnel tests; the indications of wind flow intensities (such as "strong" and "weak") are qualitative measures of smoke flow patterns in the wind tunnel chamber.

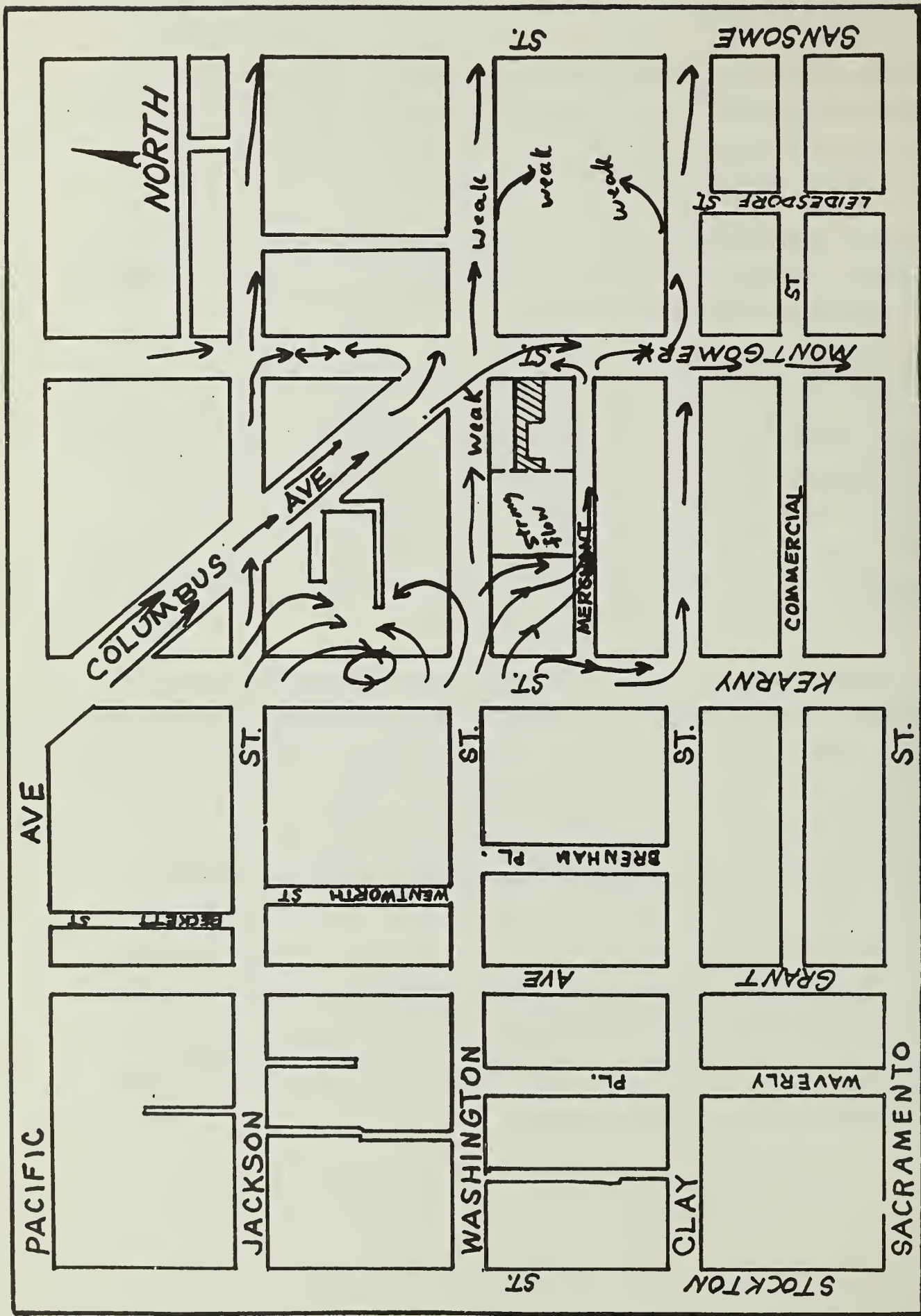


FIGURE B1: WIND FLOWS FOR NORTHWEST WIND - EXISTING CONDITIONS

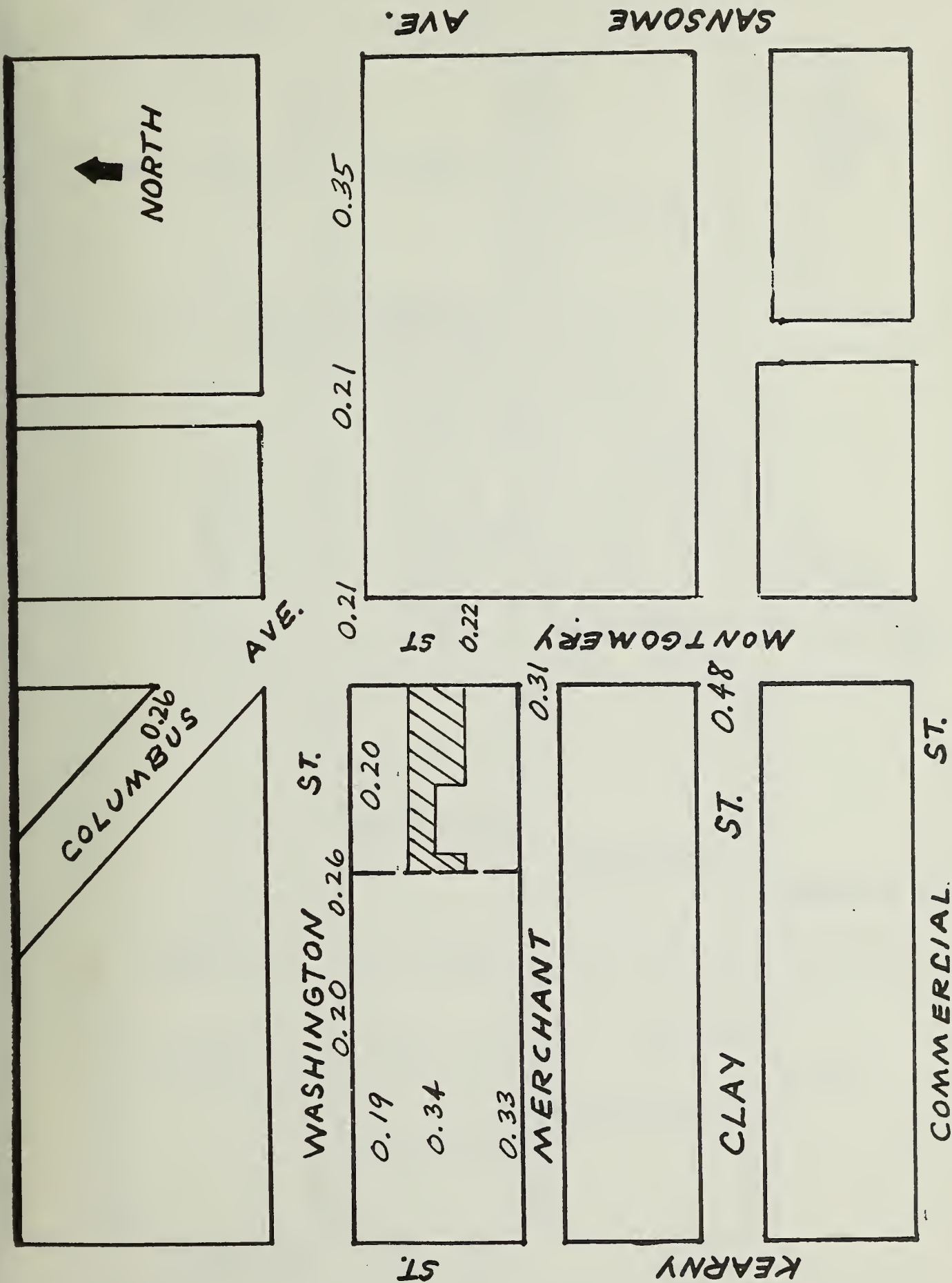


FIGURE B2: WIND SPEED RATIOS FOR NORTHWEST WIND - EXISTING CONDITIONS

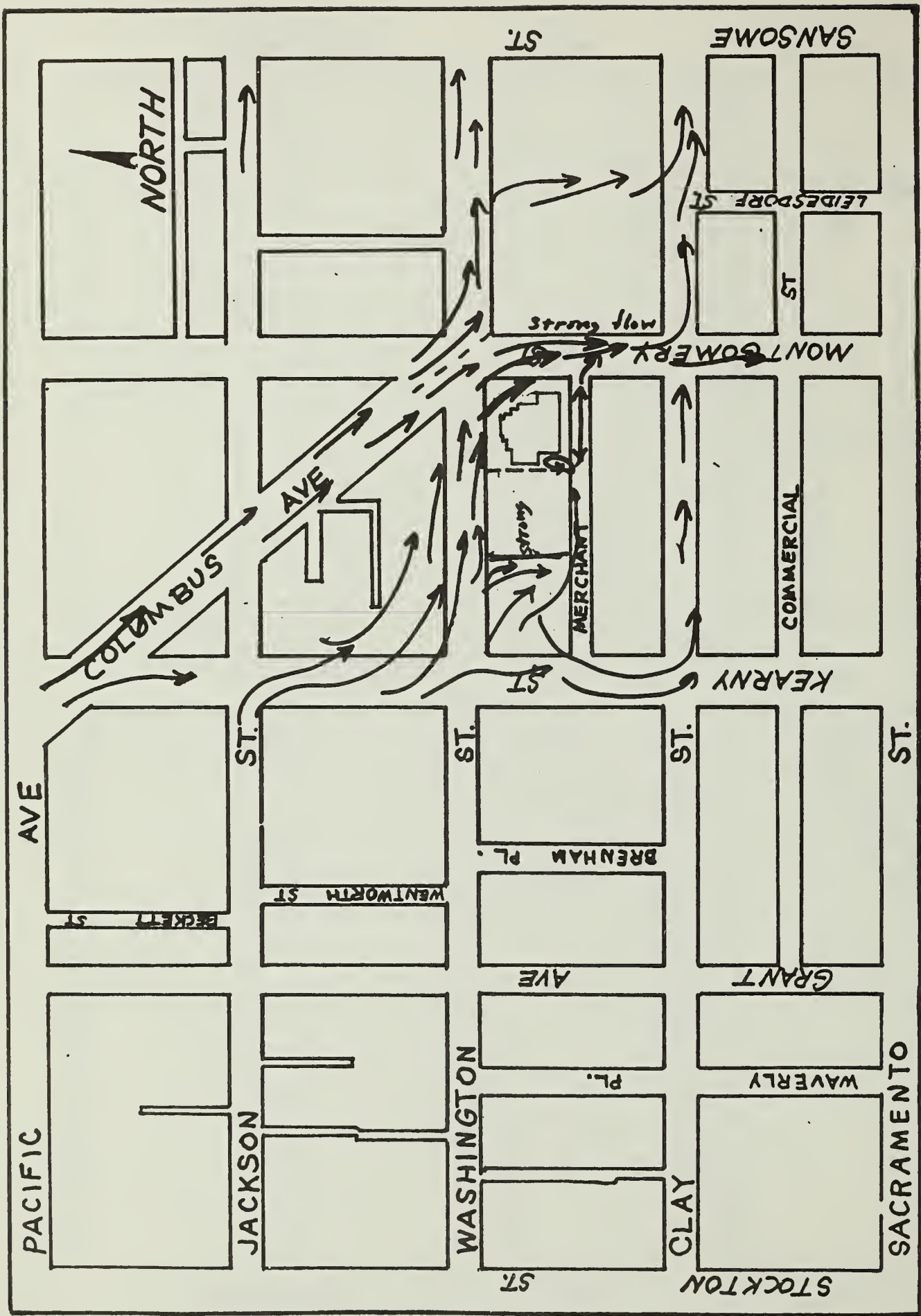


FIGURE B3: WIND FLOWS FOR NORTHWEST WIND - PROJECT

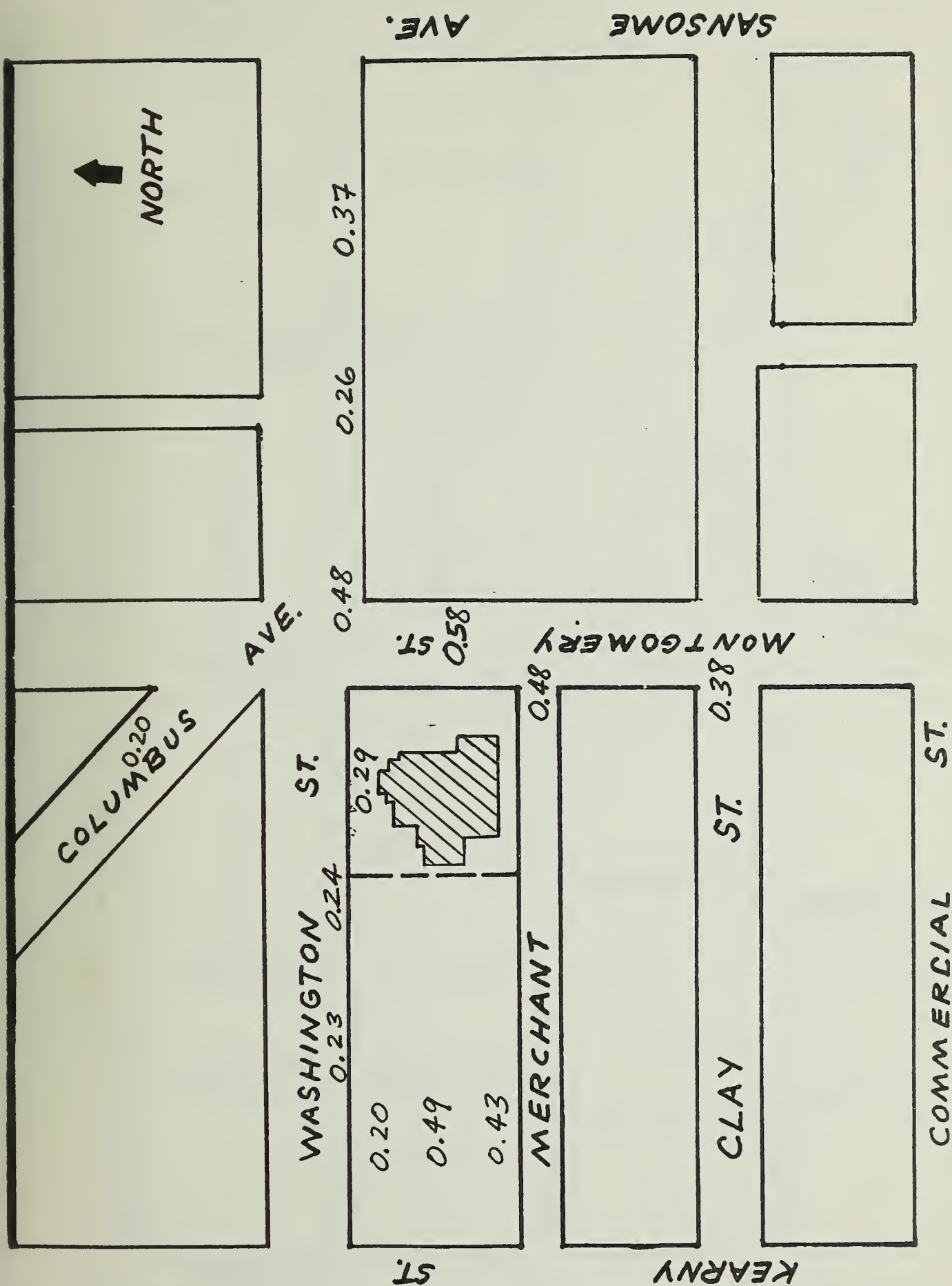


FIGURE B4: WIND SPEED RATIOS FOR NORTHWEST WIND - PROJECT

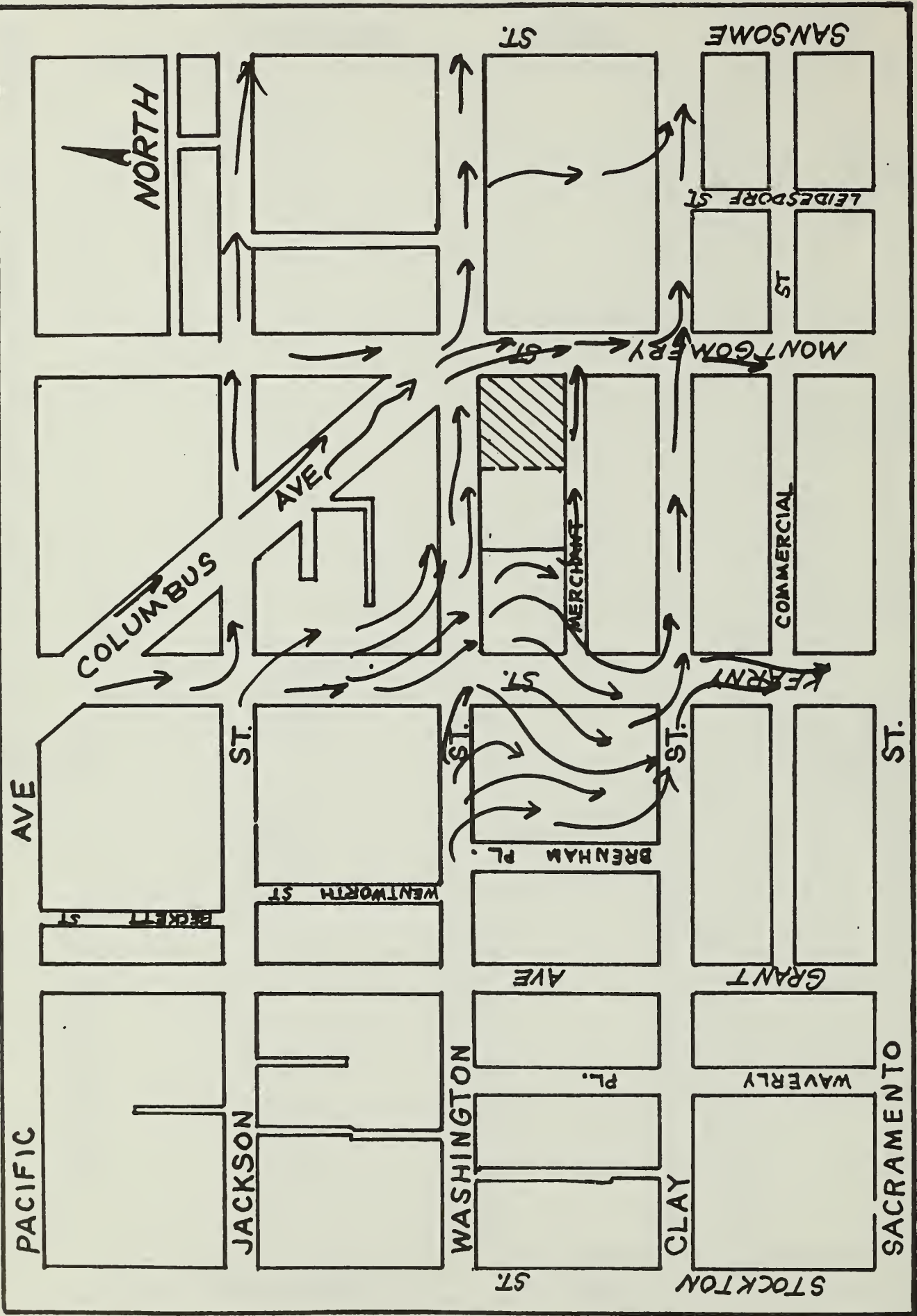


FIGURE B5: WIND FLOWS FOR NORTHWEST WIND - ALTERNATIVE 5

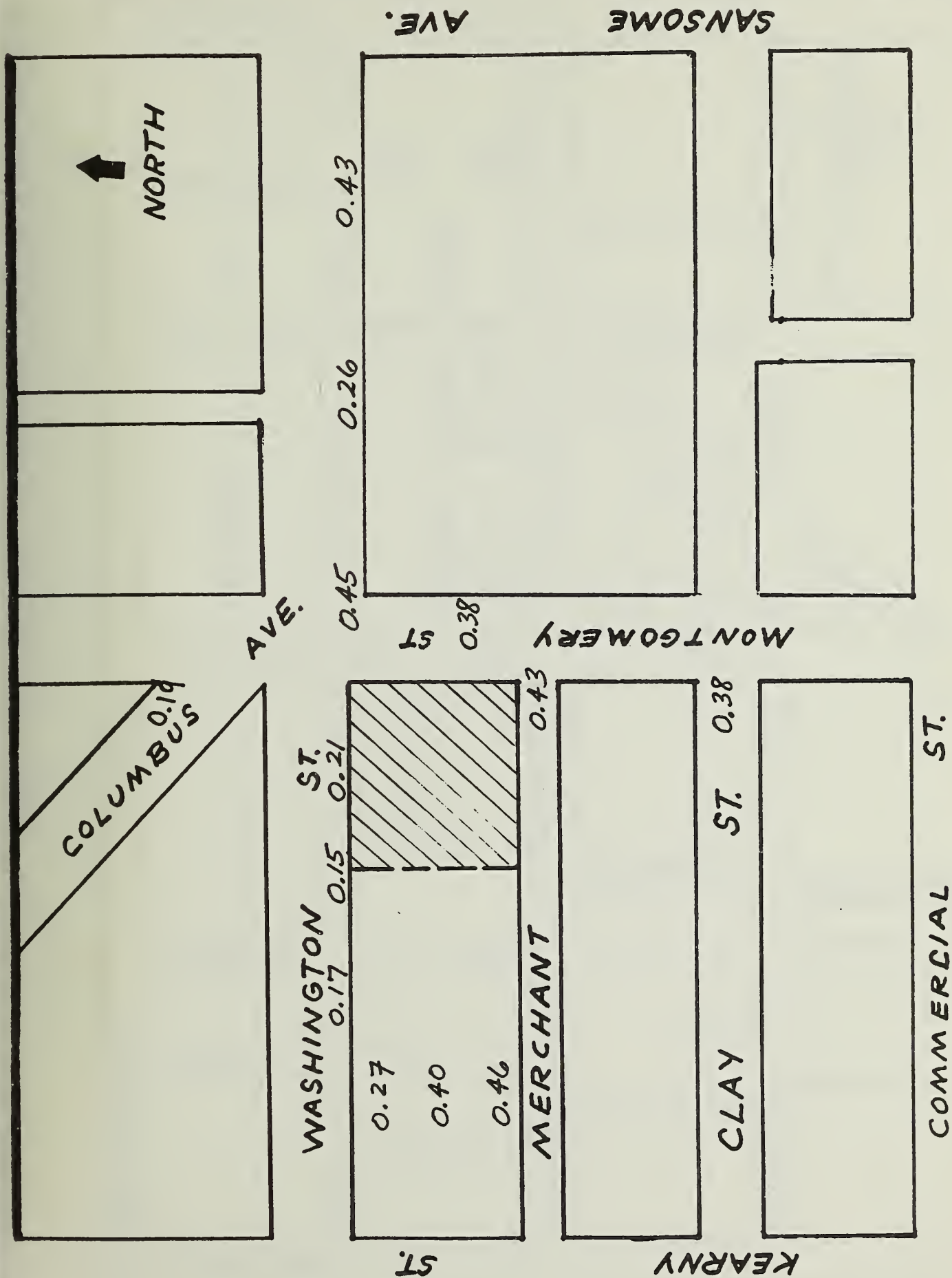


FIGURE B6: WIND SPEED RATIOS FOR NORTHWEST WIND - ALTERNATIVE 5

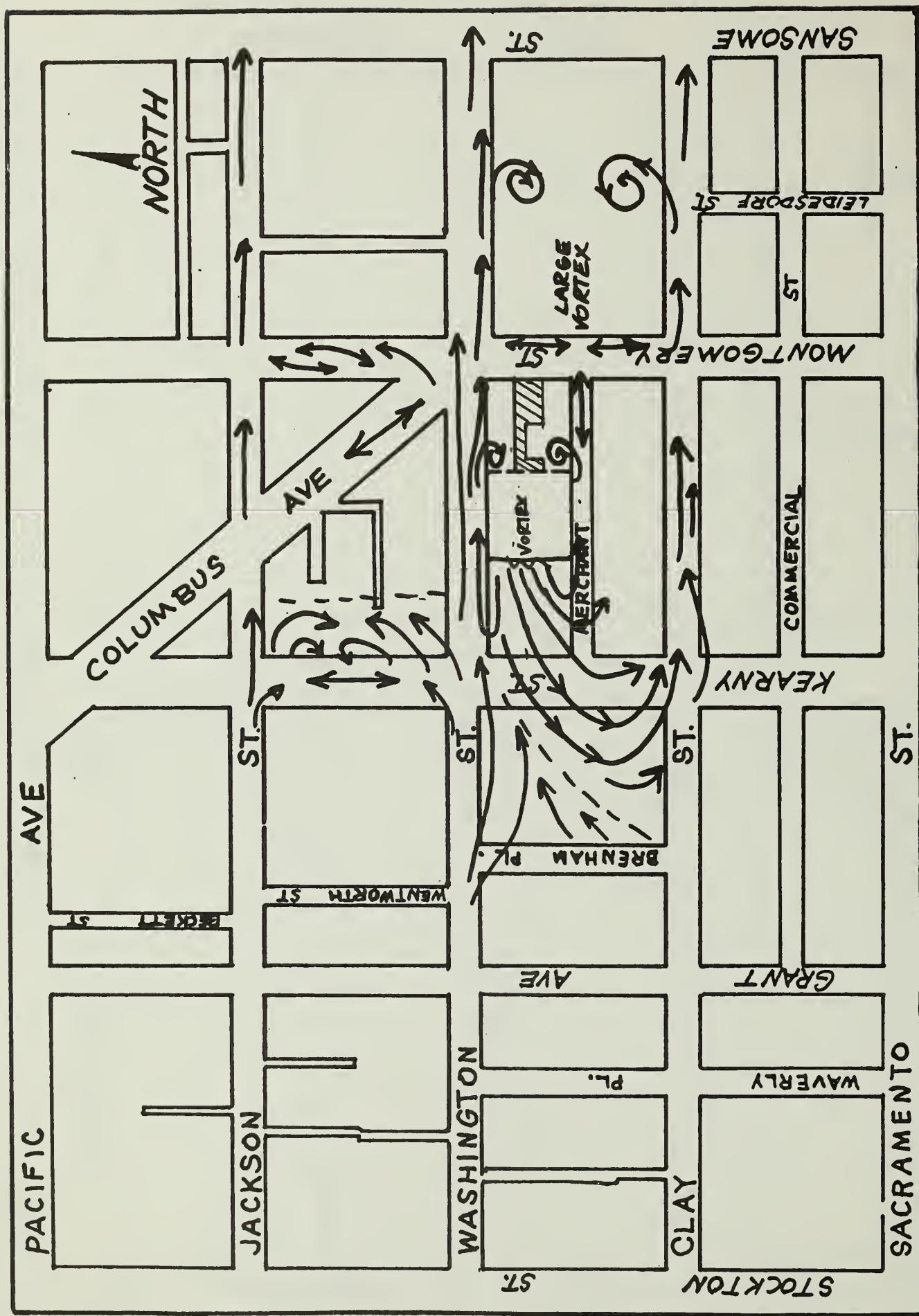


FIGURE B7: WIND FLOWS FOR WESTERLY WIND - EXISTING CONDITIONS

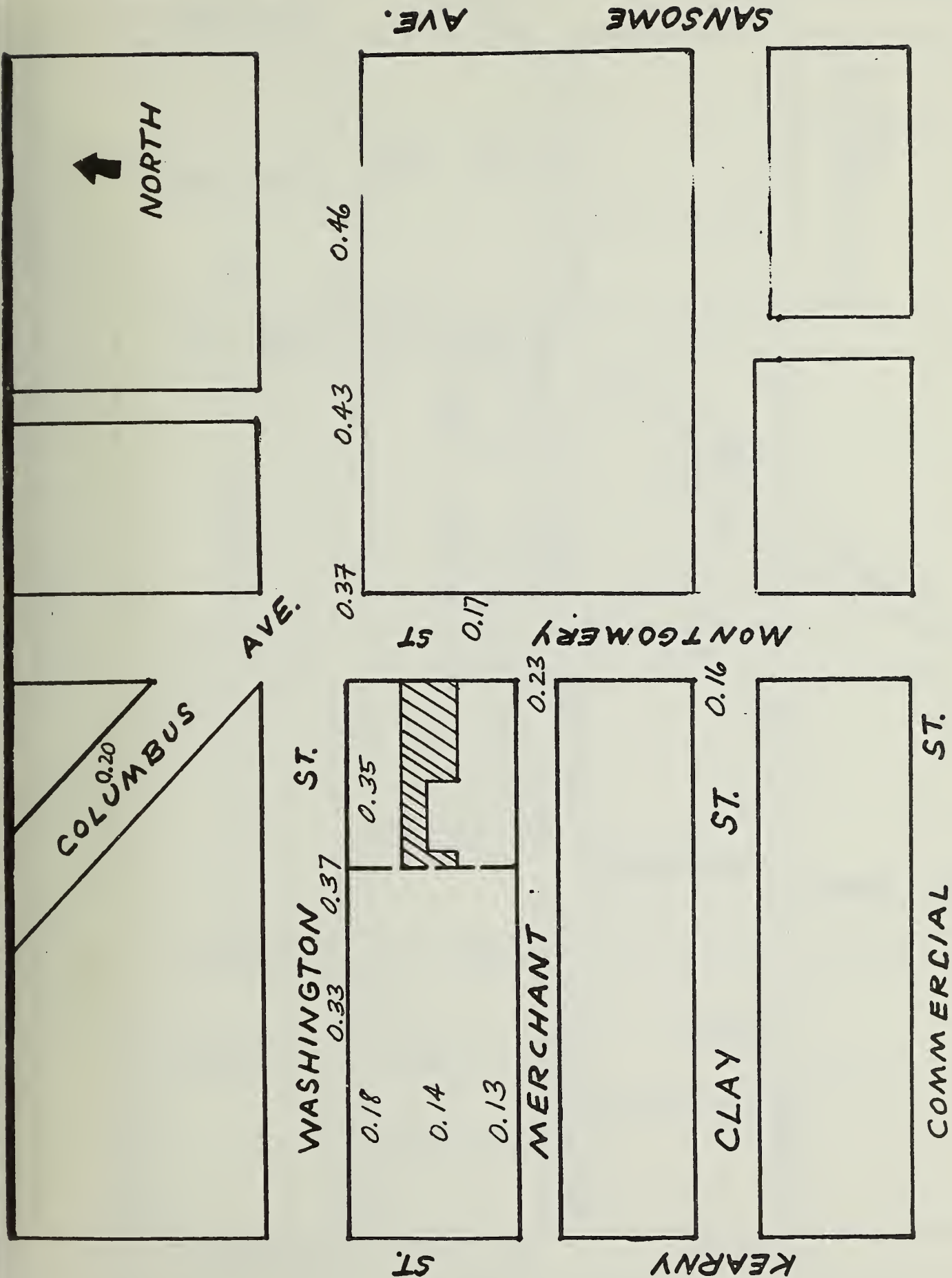


FIGURE B8: WIND SPEED RATIOS FOR WESTERLY WIND - EXISTING CONDITIONS

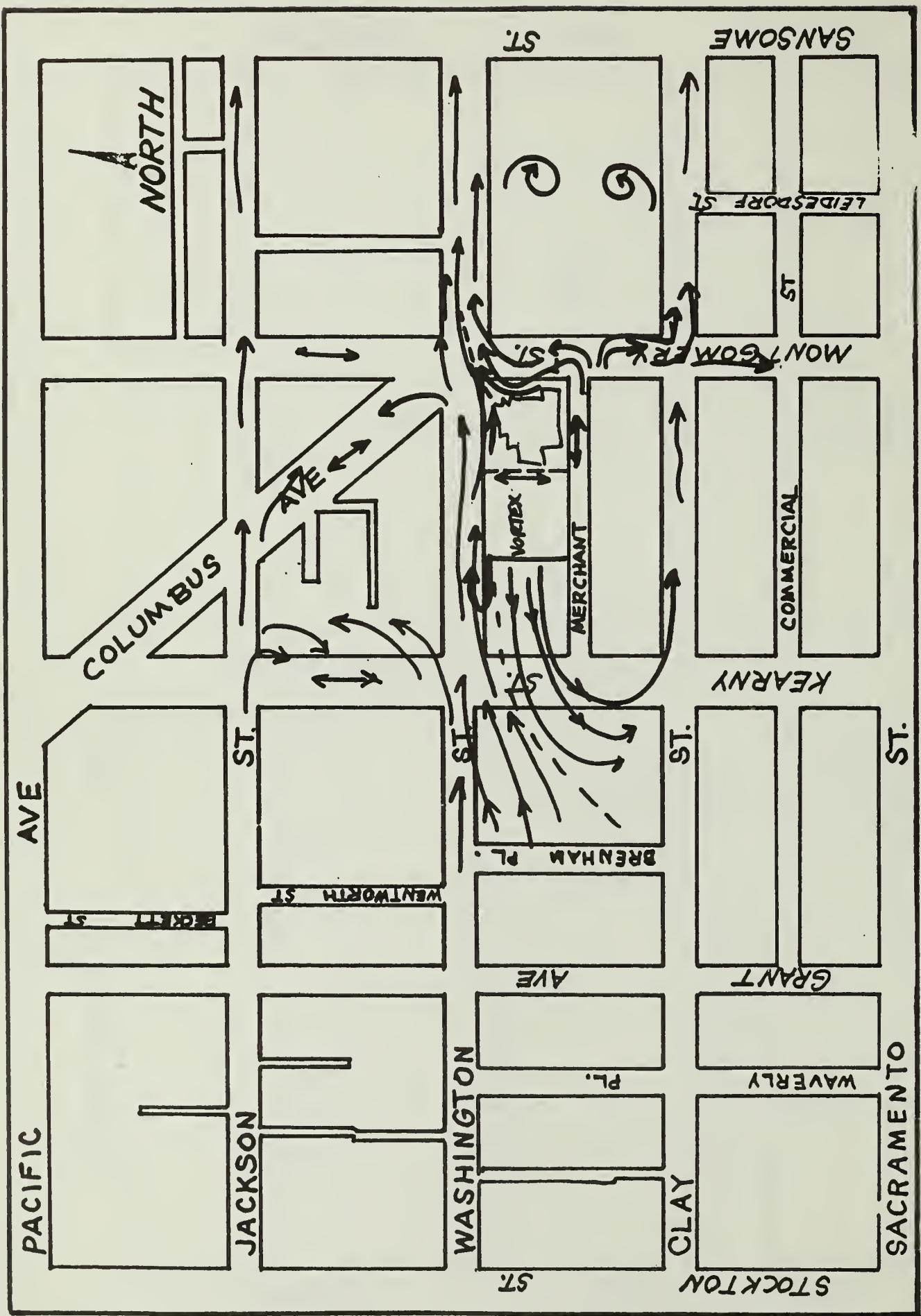


FIGURE B9: WIND FLOWS FOR WESTERLY WIND - PROJECT

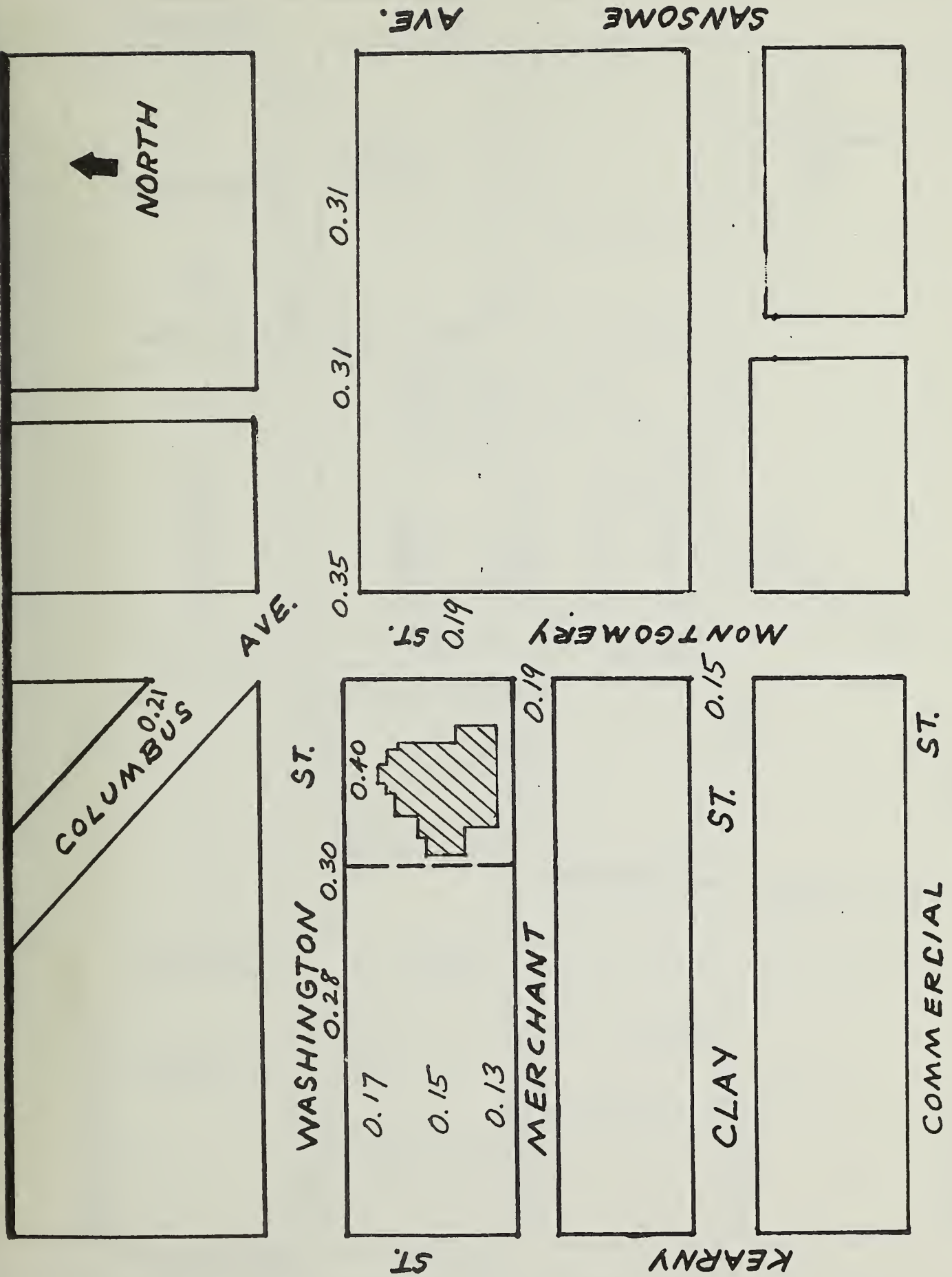


FIGURE B10: WIND SPEED RATIOS FOR WESTERLY WIND - PROJECT

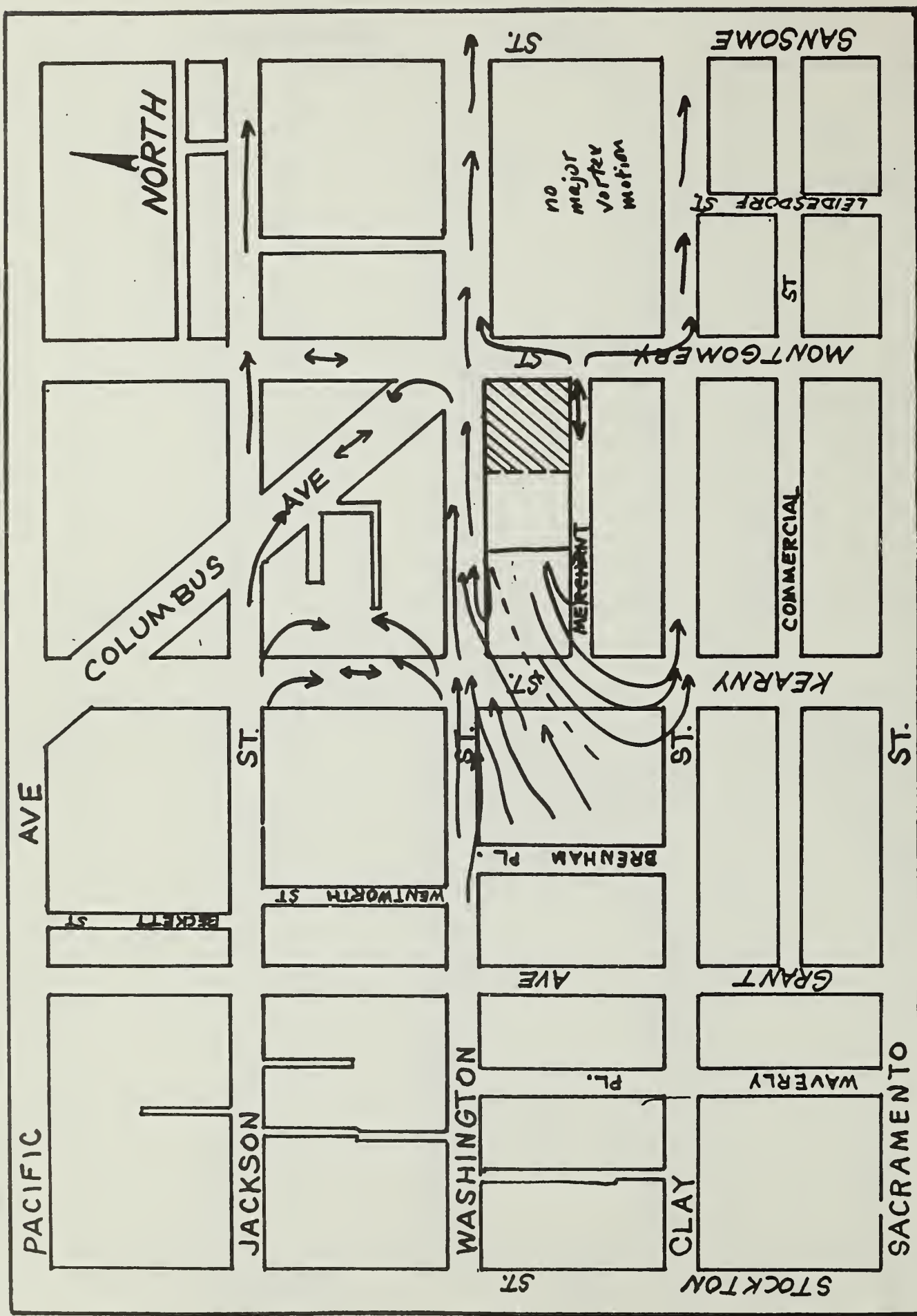


FIGURE B11: WIND FLOWS FOR WESTERLY WIND - ALTERNATIVE 5

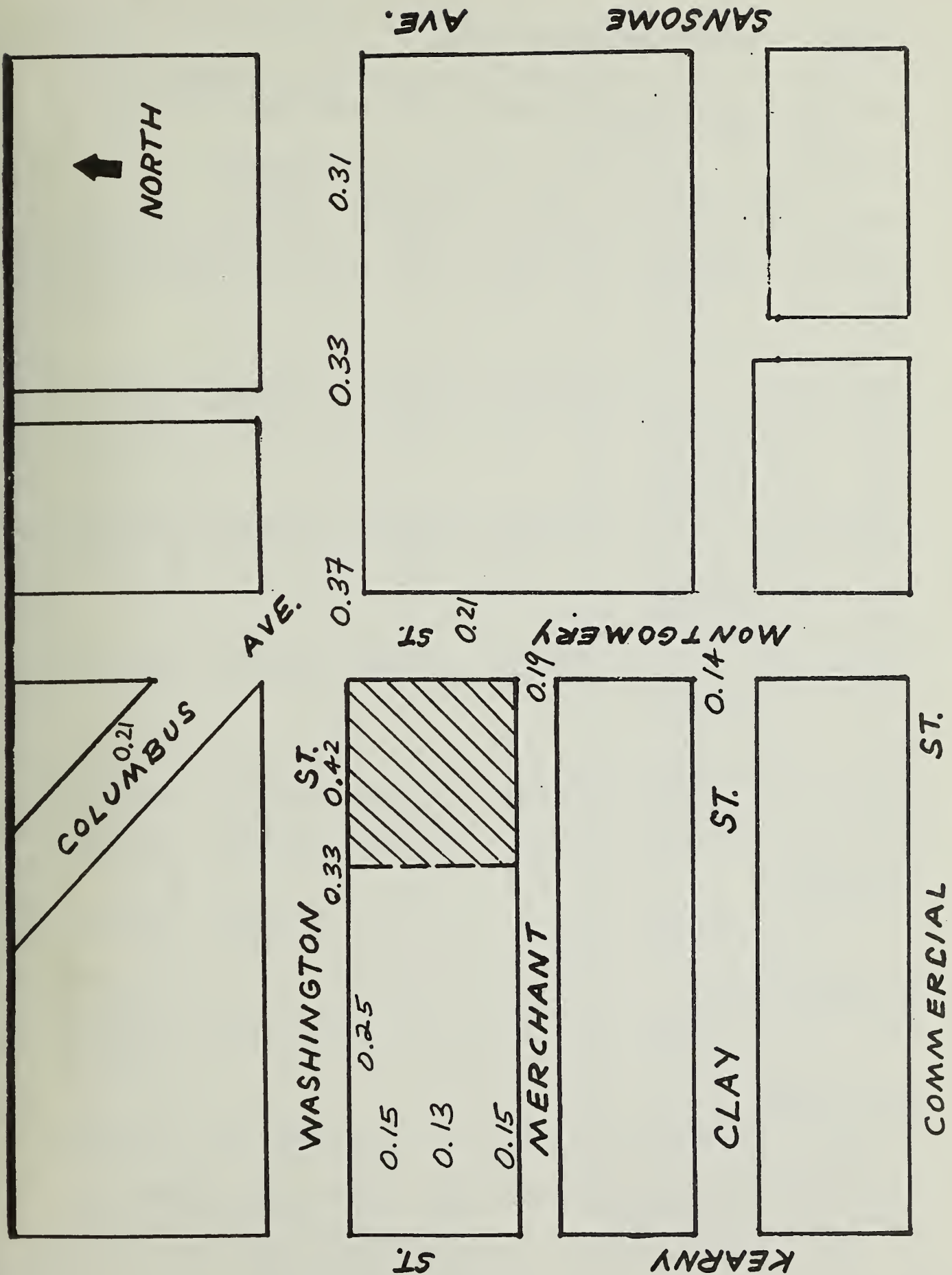


FIGURE B12: WIND SPEED RATIOS FOR WESTERLY WIND - ALTERNATIVE 5

APPENDIX C: EMPLOYMENT AND HOUSING FACTORS

TABLE C-1: MAJOR OFFICE BUILDING CONSTRUCTION IN SAN FRANCISCO AS OF OCTOBER 1, 1981*

Year	Total Gross Sq. Ft. Completed	5-Year Total	5-Year Annual Average	Cumulative Total Since 1960	All Office Buildings
Pre-1960	16,050,000			0	33,370,000
1960	836,000				
1961	170,000				
1962	--				
1963	1,219,000				
1964	--				
1960-1964		2,225,000	445,000	2,225,000	35,595,000
1964	1,529,000				
1966	1,027,000				
1967	2,046,000				
1968	186,000				
1969	3,173,000				
1965-1969		7,961,000	1,592,000	10,186,000	43,556,000
1970	1,853,000				
1971	--				
1972	1,858,000				
1973	2,633,000				
1974	2,548,000				
1970-1974		8,892,000	1,778,000	19,078,000	52,448,000
1975	--				
1976	1,646,000				
1977	3,551,000				
1978	--				
1979	2,220,000				
1975-1979		7,417,000	1,483,000	26,495,000	58,865,000
1980	627,000				
1981	2,348,000	2,975,000	1,487,500*	29,470,000	62,605,000
Additional Projects Under Construc- tion	7,488,000			36,958,000	69,394,000
Additional Projects Approved Not under Construc- tion	3,196,000			40,154,000	72,220,000
Additional Projects Under Review or Proposed	5,860,000			46,014,000	77,494,000

* Ten year average.

SOURCE: Department of City Planning, October 1, 1981, Statistical Update on Citywide Office Development.

TABLE C-2: PROJECTED EFFECTS OF DOWNTOWN OFFICE DEVELOPMENT ON REGIONAL HOUSING MARKETS, 1980-85

	Residency of S.F. Office Employees*	Project Demand in 1985		Cumulative Demand 1979 to 1985***		Net Housing Stock Growth 1980-1985		Project Demand as % of Growth 1980 to 1985 Percent
		No. Emp.	No. Households**	No. Emp.	No. Households	No. Units	Percent	
San Francisco	40	380	200	31,000	17,200	5,000 to 8,000	1.1 to 2.0	
Peninsula (San Mateo and Santa Clara Cos.)	18	170	110	13,200	8,800	75,000	0.1	
East Bay (Alameda and Contra Costa Cos.)	30	285	180	24,000	16,000	41,000	0.2	
North Bay (Marin and Sonoma Cos.)	12	115	65	9,300	6,200	25,000	0.1	
TOTAL	100	950	247	77,500	48,200	146,000 to 179,000	0.2	

* Weighted average of expected employees in Federal Reserve Bank (EE 78.207), 101 California Street (EE 78.27), Pacific Gateway, (EE 78.61), and Crocker National Bank (EE 78.298), from 456 Montgomery Street Final EIR (EE 78.178), p. 167.

** Projected housing demand was based on a formula, (the net increase of gross square footage of office space divided by 250, multiplied by 0.22), which was developed by the San Francisco City Planning Department in a memorandum entitled "Housing Requirements for Office Development in San Francisco," July 1981. The same formula was applied to the other regional counties but in the equation the average number of employed adults per household was changed from 1.8 to 1.5.

*** Based on projected San Francisco housing demand created by downtown office development, in Sedway/Cooke, October 1979, Downtown San Francisco Conservation and Development Planning Program, Phase 1, pp. 47, 48. San Francisco growth estimates are based on ABAG, January 1980, San Francisco Bay Area Housing Activity Report, Number 2, and on Mary Schlosser, Research Analyst, Population Research Unit, California Department of Finance, telephone communication, August 13, 1980. Other housing market estimates are based solely on Department of Finance data. Growth rates are based on averaged rates (San Francisco 0.4%, Peninsula 2.2%, East Bay 1.2%, North Bay, 2.5%).

SOURCE: Environmental Science Associates, Inc.

APPENDIX D: TRANSPORTATION, CIRCULATION AND PARKING

TABLE D-1: VEHICULAR LEVELS OF SERVICE

Level of Service	Description	Volume/Capacity* v/c Ratio
A	Level of Service A describes a condition where the approach to an intersection appears quite open and turning movements are made easily. Little or no delay is experienced. No vehicles wait longer than one red traffic signal indication. The traffic operation can generally be described as excellent.	0.60
B	Level of Service B describes a condition where the approach to an intersection is occasionally fully utilized and some delays may be encountered. Many drivers begin to feel somewhat restricted within groups of vehicles. The traffic operation can be generally described as very good.	0.61- 0.70
C	Level of Service C describes a condition where the approach to an intersection is often fully utilized and back-ups may occur behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so. The driver occasionally may have to wait more than one red traffic signal indication. The traffic operation can generally be described as good.	0.71- 0.80
D.	Level of Service D describes a condition of increasing restriction causing substantial delays and queues of vehicles on approaches to the intersection during short times within the peak period. However, there are enough signal cycles with lower demand such that queues are periodically cleared, thus preventing excessive back-ups. The traffic operation can generally be described as fair.	0.81- 0.90
E	Capacity occurs at level of service E. It represents the most vehicles that any particular intersection can accommodate. At capacity there may be long queues of vehicles waiting up-stream of the intersection and vehicles may be delayed up to several signal cycles. The traffic operation can generally be described as poor.	0.91- 1.00
F	Level of Service F represents a jammed condition. Back-ups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the approach under consideration. Hence, volumes of vehicles passing through the intersection vary from signal cycle to signal cycle. Because of the jammed condition, this volume would be less than capacity.	1.00

*Capacity is defined as Level of Service E.

SOURCE: San Francisco Department of Public Works, Traffic Division, Bureau of Engineering 1965.

TABLE D-2: ESTIMATED EXISTING VEHICLE TRAFFIC VOLUMES IN THE VICINITY OF
THE PROJECT SITE (number of vehicles)*

<u>Street</u>	<u>Section</u>	<u>24 Hour</u>	<u>P.M. Peak Hour**</u>	<u>Max. 8 Hours</u>
Washington	Sansome-Montgomery	11,300	1,000	6,440
Montgomery	Washington-Clay	16,400	1,200	9,350
Clay	Front-Davis	18,200	1,330	10,370
Sansome	Pacific-Broadway	7,900	1,050	4,500

* The traffic volume data shown are derived from historical data for 1976, 1978, and 1979, obtained from the San Francisco Department of Public Works, Bureau of Traffic Engineering. Estimates of some 1981 traffic volumes were made by TJKM based on manual intersection count data collected by TJKM on Thursday, July 16, and Monday through Wednesday July 20-22, 1981, and on the historical data for 1976, 1978, and 1979.

**Peak hour is the single peak hour during the peak period between 4:00 and 6:00 p.m.

SOURCE: TJKM, Transportation Consultants

TABLE D-3: PROJECTED VEHICLE VOLUMES ON STREETS NEAR THE PROJECT SITE
IN 1984

<u>Street</u>	<u>Section</u>	<u>1984 Base</u>			<u>1984 Base + Project</u>			<u>%**</u>
		<u>24</u> <u>Hour</u>	<u>Peak</u> <u>Hour*</u>	<u>Max</u> <u>8 Hour</u>	<u>24</u> <u>Hour</u>	<u>Peak</u> <u>Hour</u>	<u>Max</u> <u>8 Hour</u>	
Washington	Sansome-Montgomery	11,370	1,010	6,480	11,610	1,050	6,620	4
Montgomery	Washington-Clay	16,500	1,210	9,410	16,865	1,270	9,620	5
Clay	Front-Davis	20,680	1,750	1,1780	20,930	1,800	11,925	3
Sansome	Pacific-Broadway	8,460	1,160	4,820	8,710	1,210	4,960	4

* Peak hour is the single peak hour during the peak period between 4:00 and 6:00 p.m.

**Percent increase over the 1984 Base peak hour traffic volume.

SOURCE: TJKM, Transportation Consultants

TABLE D-4: PEDESTRIAN FLOW REGIMENS

<u>Flow Regime</u>	<u>Walking Speed</u>		<u>Flow Rate (P/F/M)*</u>	
	<u>Choice</u> -----	<u>Conflicts</u>	<u>Average</u>	<u>Platoon</u>
Open	Free Selection	None	0.5	0.5
Unimpeded	Some Selection	Minor	0.5-2	
Impeded	Some Selection	High Indirect Interaction	2-6	0.5-6
Constrained	Some Restriction	Multiple	6-10	6-10
Crowded	Restricted	High Probability	10-14	10-4
Congested	All Reduced	Frequent	14-18	14-18
Jammed**	Shuffle Only	Unavoidable	18	

* P/F/M = Pedestrians per foot of sidewalk width per minute.

** For Jammed Flow, the (attempted) flow rate degrades to zero at complete breakdown.

SOURCE: Pushkarev, Boris and Jeffry M. Zupan, Urban Space for Pedestrians, Cambridge, MA. MIT Press, 1975.

TABLE D-5: PEAK 15-MINUTE PEDESTRIAN VOLUMES IN 1981 (PROJECT SIDE OF STREET)

Sidewalk	Effective Width*	Volume**			Flow Rate***			Pedestrian Flow Regime		
		A.M.	NOON	P.M.	A.M.	NOON	P.M.	A.M.	NOON	P.M.
Montgomery St.	7.0 ft.	40	170	140	0.4	1.6	1.4	Open	Unim	Unim
Washington St.	8.5 ft.	30	190	50	0.2	1.5	0.4	Open	Unim	Open

*Effective widths take account of poles, planter boxes, people standing at store windows, etc.

**Pedestrians per 15 minutes.

***Pedestrians per minute per foot of sidewalk width.

+Abbreviations are the following:

Unim = Unimpeded; Impd = Impeded

SOURCE: TJKM, based on manual pedestrian counts made by TJKM on Wednesday, July 22, 1981

TABLE D-6: P.M. PEAK 15-MINUTE CROSSWALK VOLUMES IN 1981

Crosswalk	Width	Volume P.M.	Approach Rate* P.M.	Green Signal Phase	Crossing Rate** P.M.	Pedestrian Flow Regime P.M.	Reservoir Space*** (feet)
Montgomery Washington	11 ft.	130	0.8	40%	2.0	Impeded	1.2
Washington at Montgomery	11 ft.	65	0.4	60%	0.7	Unimpeded	0.4

*Approach rate is pedestrians per minute per foot of crosswalk width.

**Crossing rate is pedestrians per foot per minute of green signal time

***Reservoir space is a measure of depth of sidewalk used to store pedestrians queued to cross (see Pushkarev and Zupan, p. 110); assumes 5 square feet per person waiting

SOURCE: TJKM, based on manual pedestrian counts made by TJKM on Monday - Wednesday, July 20-22, 1981.

TABLE D-7: EXISTING PEAK HOUR TRANSIT RIDERSHIPS AND CAPACITIES
(Selected Routes;* Peak Direction Only)

	<u>Riders</u>	<u>Vehicles</u>	<u>Capacity+</u>		<u>% Occupancy</u>		<u>Peak</u>
			<u>Seated</u>	<u>Total</u>	<u>Seated</u>	<u>Total</u>	
BART:							
TransBay	10,500	122 **	8,780	13,180	120	80	p.m.
Westbay	6,360	89 **	6,410	9,610	99	66	p.m.
A-C Transit	9,130	199	9,990	12,490	91	73	p.m.
SamTrans	970	18	850	1,060	114	92	p.m.
So. Pacific RR	4,395	9 ***	11,000	11,000	40	40	p.m.
Golden Gate Transit							
Motor Coach	5,050	122	5,470	6,710	92	75	a.m.
Ferry	1,070	3	1,410	2,075	76	52	p.m.

* SamTrans: 7F, 7B, 5M, 7R;

A-C Transit: A,B,BX,C,CH/CB,E,EX,F,FSG/FX,G,H,K,KH,L,LX,N,NX,O,OX,R/RH,RD/RF/RCV,S,SW,V,W,Y.

** BART data is on a per car basis. Fourteen trains ran in each direction in the peak hour. Eastbound there were 7 Concord trains (average 10 cars per train); 4 Fremont trains (average 10 cars per train); and 3 Richmond trains (average 4 cars per train).

*** Number of trains, assuming 10 cars per train to reflect available rolling stock. Actual number of cars per train is less than 10.

+ Capacity has been calculated based on the following per-vehicle capacities:

	<u>Seated Passengers</u>	<u>Total Seated and Standing Passengers</u>
BART	72	108
A-C Transit	48	60
SamTrans	47	59
Southern Pacific	100/150	100/150
Golden Gate Transit Motor Coach	45	55
Sausalito Ferry	400	575
Larkspur Ferry	510	750

SOURCE: TJKM

TABLE D-8: BUILDINGS INCLUDED IN THE CUMULATIVE ANALYSIS

The buildings which were elements of the cumulative transportation analysis are in or near the Downtown Business district and are listed below by their Office of Environmental Review EIR file number and name.

74.253	444 Market: Shaklee
74.164	Pacific Bldg. III - Apparel Mart
77.256	Levi's Plaza
78.27	101 California
78.207	Federal Reserve Bank
78.298	1 Montgomery: Crocker Tower
78.334	1 Sansome
78.413	150 Spear Street
No EE Number	Embarcadero 4
79.57	DAON Building (Battery & Sacramento)
79.169	The Pacific Lumber Bldg. (Washington & Sansome)
79.178	456 Montgomery
79.196	315 Howard
78.61	Pacific Gateway
80.26	101 Montgomery*
80.268	Five Fremont Center*
79.236	101 Mission*
80.171	Hotel Ramada*
79.257	Tower II, Hilton Hotel*
79.283	Holiday Inn*
80.57	25 Jessie St (neg. dec.)*
80.355	New Montgomery Place PDEIR*
80.339	San Francisco Federal Savings Building PDEIR*
80.296	Bank of Canton Headquarters Building PDEIR*
80.349	Spear/Main*
81.25	1155 Market St.*
81.61	135 Main PDEIR*
81.183	Mission/Main PDEIR*
81.244D	185 Berry Street (China Basin)*

*Not on Attachment 2 (October 1980) to "Guidelines," included at request of Office of Environmental Review, San Francisco Department of City Planning.

SOURCE: TJKM

TABLE D-9: ESTIMATED P.M. PEAK-HOUR WEEKDAY TRAVEL* GENERATED BY THE PROJECT

<u>Origin/Destination</u>	<u>%</u>	<u>Total</u>	<u>Auto</u>	<u>Transit</u>	<u>Walk**</u>
North Bay	11	80	50	30	-
East Bay	23	165	75	90	-
Penninsula	15	105	60	45	-
San Francisco	51	370	125	225	20
Total	100	720	310	390	20

* Work and non-work person trip ends

**Persons who walk to the site without using any other form of transportation

Source: TJKM

TABLE D-10: PROJECTED 1984 P.M. PEAK MUNI ANALYSIS

Line	1984 Base			Project Riders	1984 Base + Project		
	1984 Capacity	Riders	Total Load Factor		Riders	Total Load Factor	Project Load Factor
1	450	546	1.21	2	548	1.22	0.01
1X	750	839	1.12	4	843	1.12	0.00
2	600	785	1.31	3	788	1.31	0.00
3	525	696	1.33	3	699	1.33	0.00
4	375	322	0.86	1	323	0.86	-
5	1275	1363	1.07	6	1369	1.07	0.00
6	675	692	1.03	3	695	1.03	0.00
7	450	453	1.01	2	455	1.01	0.00
8	1125	910	0.81	4	914	0.81	-
9	750	732	0.98	3	735	0.98	-
11	750	932	1.24	4	936	1.25	0.01
12	525	674	1.28	3	675	1.29	0.01
14	1275	1683	1.32	7	1690	1.33	0.01
14GL	300	354	1.18	2	356	1.19	0.01
14X	675	906	1.34	4	910	1.35	0.01
15	975	1220	1.25	5	1225	1.26	0.01
21	825	914	1.11	4	918	1.11	0.00
27	300	213	0.71	1	214	0.71	-
30	1425	1427	1.00	7	1434	1.01	0.01
30X	975	1100	1.13	5	1105	1.13	0.00
31	525	687	1.31	3	690	1.31	0.00
31X	675	785	1.16	3	788	1.17	0.01
38	1125	1356	1.21	6	1362	1.21	0.00
38L	675	898	1.33	4	902	1.34	0.01
38AX	600	691	1.15	3	694	1.16	0.01
38BX	300	266	0.89	1	267	0.89	-
42	300	320	1.07	1	321	1.07	0.00
45	675	839	1.24	4	843	1.25	0.01
55	1650	1974	1.20	9	1983	1.20	0.00
71	375	527	1.41	2	529	1.41	0.00
72	300	381	1.27	2	383	1.28	0.01
80X	600	583	0.97	3	586	0.98	-
J	1235	1105	0.89	5	1110	0.90	-
K	3900	4314	1.11	19	4333	1.11	0.00
N	2400	2836	1.18	12	2848	1.19	0.01

Note: The 83 line is also in the vicinity of the site, but no ridership data are yet available for it.

SOURCE: San Francisco Department of City Planning, and TJKM

APPENDIX E: AIR QUALITY

TABLE E-1: SAN FRANCISCO AIR POLLUTANT SUMMARY 1978-1980

STATIONS: 939 Ellis Street and 900 23rd Street, San Francisco*

<u>POLLUTANT:</u>	<u>STANDARD</u>	<u>1978</u>	<u>1979</u>	<u>1980*</u>
OZONE (O₃) (Oxidant)				
1-hour concentration (ppm /a/)				
Highest hourly average	(0.08) 0.12 /b,c/	0.11	0.08	0.09
Number of standard excesses		(4) 0	0	0
Expected Annual Excess/c/		0.3	0.0	0.0
CARBON MONOXIDE (CO)				
1-hour concentration (ppm)				
Highest hourly average	35 /b/	17	20	10
Number of standard excesses		0	0	0
8-hour concentration (ppm)				
Highest 8-hour average	9 /b/	9.4	13.8	7.5
Number of standard excesses		1	2	0
NITROGEN DIOXIDE (NO₂)				
1-hour concentration (ppm)				
Highest hourly average	0.25 /d/	0.30	0.16	0.17
Number of standard excesses		4	0	0
SULFUR DIOXIDE (SO₂)				
24-hour concentration (ppm)				
Highest 24-hour average	0.05 /d/	0.024	0.034	0.018
Number of standard excesses/e,f/		0	0	0
TOTAL SUSPENDED PARTICULATE (TSP)				
24-hour concentration (ug/m ³ /g/)				
Highest 24-hour average	100 /d/	128	117	173
Number of standard excesses/f/		1	1	6
Annual concentration (ug/m ³)				
Annual Geometric Mean	60 /d/	42	42	52
Annual standard excess		No	No	No
LEAD				
Calendar quarter concentration (mg/m ³)				
Highest quarterly average	1.5 /b/	1.19	0.95	0.53
Number of standard excesses		0	0	0

* In January 1980 all of the pollutant-monitoring functions of the 939 Ellis St. Station were transferred to the 900 23rd St. Station.

Table E-1 (continued)

/a/ ppm: parts per million.

/b/ National standard, not to be exceeded more than once per year (except for annual standards which are not to be exceeded).

/c/ The national ozone standard was revised from 0.08 ppm to 0.12 ppm in January 1979. The number of excesses shown in parentheses is of the old 0.08 ppm standard in effect at the time. Expected Annual Excess is a three-year average of annual excesses of the new 0.12 ppm standard.

/d/ California standard, not to be equaled or exceeded.

/e/ The sulfur dioxide standard is considered to be exceeded only if there is a concurrent excess of the state ozone or suspended particulate standards at the same station. Otherwise, the national standard of 0.14 ppm applies.

/f/ Number of observed excess days (measurements taken once every six days).

/g/ ug/m^3 : micrograms per cubic meter.

SOURCE: BAAQMD, 1978 - 1980, Contaminant and Weather Summaries.
